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Identifying the Obstacles and Challenges of Launching Startups in the Education Industry

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A B S T R A C T

Objective: The present research aims to identify the obstacles and challenges encountered when launching startups in the education industry.

Methodology: This study employs an applied objective and, from the perspective of data collection, utilizes a qualitative approach with the implementation of descriptive phenomenological research methodology. The research field comprised 14 founders of successful educational startups, selected through purposeful sampling based on predefined criteria. Semi-structured interviews were conducted for data collection until theoretical saturation was achieved. The analysis of findings was performed using Colaizzi's seven-step strategy. The validity of the qualitative findings was confirmed using Lincoln & Guba's (1985) four criteria for judgment: credibility, transferability, confirmability/neutrality, and reliability/consistency, further validated by Krippendorff's alpha.

Findings: The analysis of findings led to the identification of 176 key phrases, which were then aggregated into 60 components and categorized, culminating in the identification of seven factors including challenges and obstacles related to cultural factors, financial and economic challenges, pedagogical challenges, challenges related to government laws and policies, human capital management challenges, technical infrastructure challenges, and environmental challenges.

Conclusion: In general, the results of this study can be a practical guide for founders of educational startups to anticipate the obstacles and challenges of launching their business; thus, they can prepare themselves to face possible obstacles, challenges, and problems, and with a managed and effective performance, they can reduce threats and turn them into opportunities. Additionally, the results of this study can be a roadmap for our country's policymakers and legislators to adopt better decisions and policies, as well as to

reform cumbersome laws and regulations and facilitate the process of obtaining activity licenses and legal obligations, reducing and addressing the obstacles in launching educational startups.

Keywords: *Educational startups, Obstacles and challenges, Educational entrepreneurship, Qualitative approach.*

1 Introduction

Successful educational startups are making remarkable changes in the education industry, transforming various aspects of education and the lives of different societal groups through innovative and creative solutions (Cho et al., 2019; Kakavand-Kerdi et al., 2018). Supporting the launch of startups in the education sector leads to widespread access to education, enables equitable distribution of educational opportunities, facilitates learning in all regions, promotes educational equity, enhances the attractiveness of the learning environment and process, increases learner engagement (through changing the educational environment and utilizing modern methods and tools), enables personalized learning and the development of professional education with new approaches and technologies (Hackman & Reindl, 2022), offers the chance to use technology to improve the operational processes of educational institutions (upgrading infrastructure and service delivery tools), and aids governmental agencies in streamlining educational processes, ultimately resulting in employment creation in education similar to successful sectors like transportation and retail (Kakavand-Kerdi et al., 2018).

In addition to their extensive cultural and social impact, educational startups play a significant role in a country's economic success through job creation, innovation development, and capitalization on new opportunities. Consequently, the interest in educational entrepreneurship has expanded not only in Iran but also worldwide. However, despite recent activities by university entrepreneurship centers and government support programs, and despite the sudden increase in demand for remote learning via technology due to the COVID-19 pandemic, the number of educational startups launched in Iran is below the global average (Ahmadkhani et al., 2020; KERSSENS & van DIJCK, 2022). Furthermore, the high failure rate of educational startups compared to other sectors indicates the presence of problems and deterrent factors that prevent startups from reaching the growth stage, leading to a significant number of these businesses facing challenges and failures during the launch phase (Wimal & Ajendra, 2023).

The annual analytical report by Oxford in Southeast Asia, after examining educational startups in Southeast Asian countries in 2022, identified obstacles and challenges such as weaknesses in the proper application of information and communication technology and artificial intelligence and in aligning education with current technologies (Oxford Analytica, 2022). Celeste and colleagues, in a study aimed at asserting the right to digital education in America, specifically addressed the obstacles and challenges related to government legislation and policies affecting educational startups and identified six major barriers within governmental laws and policies (Celeste & De Gregorio, 2023). In another meta-synthesis research conducted by Rodriguez Segura on studies focusing on educational startups in developing countries over a ten-year period, educational startups were examined as effective, complementary, and facilitative solutions alongside formal education. They categorized these startups into four groups that provide education through access to technology, skill learning via technological means, improvement in teaching methods, and encouragement of self-learning, identifying obstacles and challenges in four categories: technological, educational, approach-related, and external barriers (Rodriguez-Segura, 2021). In another study by Paños-Castro and colleagues, based on qualitative research with twenty-one education entrepreneurs in Spain, the main challenges identified were the lack of innovation and technology application in various aspects of educational businesses and the education process itself, insufficient attention to advertising and promotion, and inactive use of social media potentials for business development (Paños-Castro & Arruti, 2021). Renz and Hilbig identified the absence of data-centricity, uncertainty, and disregard for the role of data analysis and artificial intelligence in designing and implementing business models as significant obstacles and challenges (Renz & Hilbig, 2020). Another qualitative study by Cho and colleagues on businesses in the Latin American region identified obstacles and challenges as entrepreneurs' fear, founders' lack of financial management skills, misalignment of business services with their location, discrimination, and cultural issues (Cho et al., 2019). In another meta-synthesis by Kim and colleagues analyzing user opinions on the type and quality of services and products of 32 successful educational startups in primary to high school education worldwide over the past two decades, challenges and opportunities were explored and identified.

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They divided the challenges faced by educational startups into several layers of macro, meso, and micro obstacles and challenges, addressing them from educational, cultural, social, financial and economic, human resources, environmental, instrumental, and technological perspectives (Kim et al., 2023).

In addition, few national-level studies have been conducted in this field, which, although not directly focused on educational startups, emphasized educational entrepreneurship. For example, the research by Sayahevand and colleagues identified the absence of specific laws, the non-priority of education for people and organizations due to the economic weakness of society, the lack of entrepreneurship culture in education, low investment in education, and unfamiliarity with current knowledge and technology as threats to Iranian educational entrepreneurs (Sayeh Vand et al., 2020). Another study by Ahmadkhani and colleagues identified individual, educational, financial, and supportive challenges such as government and laws and societal attitudes as the main obstacles and challenges to entrepreneurship in Iranian higher education (Ahmadkhani et al., 2020). The study by Nejat and colleagues identified economic factors, lack of specialized education in entrepreneurship, supportive barriers, and vague laws as challenges to entrepreneurship in the education sector. In the research by Khoshkab and colleagues (2013), it was acknowledged that educational entrepreneurship can generate human, social, and economic resources, addressing new societal needs, and that achieving and expanding the culture of entrepreneurship is essential for overcoming obstacles and challenges to educational entrepreneurship (Khoshkab & Rostgar, 2013). Supporting governmental efforts can eliminate challenges and limitations to educational entrepreneurship.

Given the above explanations and the importance and necessity of startups in the education industry and their remarkable impact on the transformations and advancements of this industry, it seems necessary to first identify the obstacles and challenges facing the launch of educational startups to design a suitable model for their launch. Therefore, the aim of the current research is to investigate and identify the obstacles, challenges, and deterrent factors in the launch phase of educational startups from a qualitative perspective and from the viewpoint of the founders of successful educational startups at the national level.

2 Methods and Materials

2.1 Study Design

The present study was conducted using a qualitative method and a phenomenological approach. In this research, semi-structured interviews with founders of successful startups in the education industry were utilized to identify the obstacles and challenges of launching startups in the education sector. The sampling method was purposive and criterion-based, considering theoretical saturation. The selection criterion included startups that had been in business for at least three years or were in the growth and external funding stages.

The study reached saturation after 14 interviews. Colaizzi's seven-step strategy (1978) was used for data analysis. This method involves seven stages: 1. Carefully reading all descriptions and significant findings of participants; 2. Extracting significant expressions and sentences related to the phenomenon; 3. Conceptualizing the significant extracted sentences; 4. Sorting participant descriptions and common concepts into specific categories; 5. Integrating all deduced opinions into comprehensive and complete descriptions; 6. Summarizing the comprehensive descriptions of the phenomenon into a concise and actual description; 7. Final validation.

To ensure the validity of the research, four criteria for judgment (Lincoln & Guba, 1985) were used, including credibility, transferability, confirmability/neutrality, and reliability/consistency. Additionally, Krippendorff's alpha was used to check the reliability of the research findings, which showed a value of approximately 0.87, indicating the acceptable reliability of the analysis in this study.

3 Findings and Results

For the analysis of the findings from the interviews, Colaizzi's seven-step strategy was used. The research team, in the first stage, read and examined all the participants' statements multiple times before transcribing them verbatim. Then, in the second stage, sentences and phrases meaningful and related to the phenomenon were extracted from each interview, and in the third stage, an attempt was made to extract a component that represented the participant's purpose and basic thought from each phrase.

In the fourth stage, key phrases from the interviews were carefully studied, and after comparison and elimination of duplicates, 60 essential components were categorized. In the fifth stage, the identified components were merged, and 7

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factors were identified, including challenges and obstacles related to cultural factors, financial and economic challenges, pedagogical factors, government laws and policies, human capital management, technical infrastructure, and environmental challenges.

Table 1, the seven obstacles and challenges (factors extracted from participants' narratives) are presented.

Table 1

Factors and Challenges in Launching Educational Startups

Factors	Frequency	Participants	Challenges
Cultural factors related challenges	8	P1, P2, P5, P6, P7, P9, P11, P14	- Lack of public attention to education as an investment- Difficulty in gaining public trust due to being a startup- Entrepreneurs' lack of felt need for expertise in legal, marketing, and financial aspects of startups and negligence in obtaining specialized consultations- The general reluctance of society to spend on education compared to other areas- Difficulty in satisfying users due to the perception of low-quality education in startups in public opinion- Investors' lesser willingness to invest in educational businesses at startup stages
Financial and economic challenges	10	P1, P2, P4, P5, P6, P7, P10, P11, P12, P14	- Costly process, tools, and equipment for content and product production- High startup costs and longer time to profitability compared to other areas- Cost-intensive process of continuous evaluation and quality maintenance- Reliance on external financial sources such as loans- High cost of hiring and attracting expert teaching staff- High costs of advertising and marketing- Taking loans with high-interest rates during startup- Forced to low pricing for competition- Limited profit margins
Pedagogical challenges	9	P1, P2, P3, P6, P8, P9, P12, P13, P14	- Lack of attention to content relevance to the target age group- Neglecting the verification and quality evaluation of teachings and continuous assessment of educators- The contradiction of being a marketplace and monitoring educational quality- Insufficient or irrelevant expertise, knowledge, and experience of entrepreneurs in the educational field- Lack of educational experts in startup teams- Time-consuming process of producing quality content and products- Lack of direct supervision over educational processes similar to traditional businesses (institutions and educational centers)
Challenges related to laws and government policies	12	P1, P2, P3, P4, P5, P6, P9, P10, P11, P12, P13, P14	- Lack of governmental support until becoming innovative or knowledge-based startups- Legal view of startups by governmental bodies- Lack of transparency in the process of obtaining trade licenses- Legal gaps related to educational startup activities- Lack of a body for the evaluation and supervision of educational products/services by startups- Difficulties in obtaining trade licenses in education- Excessive strictness in granting e-commerce trust symbols (eNAMAD)- Various organizations demanding unattainable licenses- Problems caused by social security organizations and tax offices
Challenges related to human capital management	13	P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14	- Lack of attention to team members' morale, effort, and commitment to a common goal- Overlapping expertise among team members- Lack of specialists in fields related to business startup in the team- Failure to create and sustain team spirit- Difficulty in attracting skilled, capable, creative, and keeping them (due to financial constraints and being a startup)- Trusting team members with sensitive information without legal commitment- Challenges in recruiting skilled educators
Technical infrastructure challenges	7	P3, P4, P7, P8, P9, P11, P13	- Problems related to infrastructure and internet bandwidth limitations- Low quality of internet service- Hardware limitations, server, hosting issues due to sanctions- Providing and creating a distribution platform for education- Choosing and focusing on a technical platform for offering education
Environmental factors related challenges	8	P3, P4, P5, P6, P8, P9, P10, P14	- Challenges created by unpredictable political/social conditions- Threats of implementing protection plans/filtering- Sanctions and exchange rate fluctuations hindering international activities- COVID-19 and its imposed limitations- Lack of access to ecosystems and accelerators in early stages- Difficulty in competing with established educational institutions and centers- Competition with rivals having connections and nepotism

4 Discussion and Conclusion

In recent decades, especially following the COVID-19 pandemic worldwide, startups in the education sector have created significant transformations in this industry. They have not only achieved astronomical growth but also assisted formal education systems by playing a complementary role, covering and addressing the weaknesses of formal school and university education. This has increased attention to these types of businesses in the education sector, leading researchers in education and entrepreneurship to focus on different dimensions of these businesses to provide the best roadmap for launching and growing educational startups. Thus, the current study was conducted with the goal of identifying the obstacles and challenges of launching startups in the education sector using a qualitative phenomenological method. To achieve the research objective, several founders of successful educational startups at the national level were selected through purposive sampling. Findings were collected through interviews with these participants and continued until theoretical saturation

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was achieved after 14 interviews. Researchers conducted this study over a one-year period using Colaizzi's seven-step content analysis method, starting with a careful review and transcription of all interviews. All descriptions and significant findings of participants were carefully read, and 176 key phrases related to the phenomenon were extracted. The key phrases were then conceptualized, and after aggregating and categorizing them, 60 components were extracted. These components were then summarized, and based on them, 7 significant factors were identified and finally validated. In the end, results showed that, based on the analysis of findings, 7 factors were identified in order of frequency: challenges and obstacles related to human capital management (13), government laws and policies (12), financial and economic challenges (10), pedagogical factors (9), cultural factors (8), environmental factors (8), and technical infrastructure (7).

Challenges and obstacles related to cultural factors: Entrepreneurial ecosystems are a mix of social, political, economic, and cultural elements in a region that support the development and growth of innovative startups and encourage novice entrepreneurs and other actors to accept the risks of launching, financing, and high-risk investments (Spigel, 2017). However, the existence of cultural obstacles and challenges can be a serious impediment, especially for startups in the education sector. Participants in the research stated: "Cultural problems usually make the launch process harder and more time-consuming. People are willing to spend money on other matters, but not so much on education," "The biggest problem is that people prefer reputable and well-established centers for education, places with a strong background, and rarely choose a startup for education, especially for courses requiring a valid certificate, people will never trust startups," "One of the obstacles on this path is cultural issues, where people easily spend on food and appearance but not on education," "Most people mistakenly think that the quality of education in educational startups is lower than what is provided in institutions and academies," "Investors are more inclined to invest in health, finance, and insurance businesses than education because they think people are more willing to spend in those areas, and thus they will reach revenue and profit faster," "The culture of seeking advice from specialists in fields related to business launching is not well-established among people, and they do not see it as necessary."

Challenges and obstacles related to financial and economic factors: Among the obstacles and challenges mentioned by most participants in the study were the financial and economic barriers in the path of launching startups in the education sector. The issue of financing for startups is not specific to developing countries; various studies in developed countries have also mentioned financing as one of the most significant obstacles and challenges facing them. According to a report by UNCTAD in collaboration with the Vice Presidency for Science and Technology of Iran, one of the significant challenges for startups in Iran is financing by private institutions, especially venture capitalists and angel investors. Therefore, suitable access to financial resources is a primary prerequisite for empowering startups for investment, growth, and job creation, such that this issue has been continuously elevated to a policy-making level in recent years (Rahimpour et al., 2021). In the field of educational startups, participants in the current study also mentioned financial and economic obstacles and challenges such as tough competition with long-established institutions and the need to price lower for competition, high startup costs and longer time to profitability compared to other sectors, the costly process of continuous evaluation and maintaining educational quality, and finally reliance on external financial resources such as loans and debts. They stated: "Financially and in terms of pricing, educational startups have to set very low fees to attract users, making it a lengthy process to reach revenue and profitability," "The most difficult and time-consuming aspect is maintaining educational quality, ensuring we provide correct and quality education across various categories and groups, which was very challenging and required a lot of attention and high costs," "There are many deterrent factors in this field, and very few driving factors, one of which is the lack of sufficient capital and not considering costs and relying on external sources like loans and debts," "Taking high-interest bank loans is one of the biggest factors leading to the failure of educational startups," "The education sector, due to its sensitivity, needs skilled educators to provide training, and skilled and expert individuals usually request high amounts for teaching and working, which is often beyond the financial capability of educational startups, especially in the initial stages," "Educational startups, to be seen and survive in the competitive market, are forced to offer their educational products and services with low profit, which is one of the biggest challenges facing educational startups," "Despite all its attractions, education is one of the relatively competitive industries in Iran, and educational startups need extensive advertising and marketing campaigns to be seen, which are very costly and often unaffordable for startups."

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Challenges and obstacles related to pedagogical factors: Paying sufficient attention to education itself as the primary goal and driver of educational businesses is of great importance. How the target group is selected in designing the business model of education, what type of content, in what order and arrangement, by which educators, in which platform, with what tools, on what subjects and lessons, and with what quality are presented to the learners, who are the users or customers of educational businesses, are all pedagogy-oriented issues and form the heartbeat of educational businesses (KERSSENS & van DIJCK, 2022). Unfortunately, one of the recurring problems in educational businesses is the founders and the core team's lack of expertise in the field of education. The second issue is the lack of continuous effort and follow-up by founders to gain sufficient knowledge, expertise, and experience in the field of education offered by the business (Khanna et al., 2023). For example, founders of most educational startups in elementary and high school levels or foreign language teaching in Iran are merely graduates of fields related to information and communication technology and engineering, lacking sufficient expertise and experience in education. Participants in the current study, who were founders and consultants of educational business areas, expressed their views on challenges related to the quality of education and pedagogy: "Another problem I am aware of, which is unfortunately very widespread and dangerous, is the accuracy, credibility, and quality of the educational content provided by educational startups. I personally believe this problem stems from the lack of sufficient expertise of startup teams in the field of education," and "The field of education, like health and medical, is a highly specialized field, but unfortunately, we see that most entrepreneurs have expertise other than education, and worse, they do not receive specialized consultancy in education, do not evaluate educational content, the capability and expertise of their educators, even their teaching methods, tools, and educational technology are not standard and lack necessary quality," and "The issue that the quality of education provided by educational startups is low causes a decrease in the public acceptance and popularity of educational startups, making the process of launching and growing startups in the education sector compared to other industries a difficult and wearisome process," and "In marketplaces, creating and maintaining educational quality is very difficult. We are not like an institute or educational organization that can supervise educational processes, and the quality of education practically depends on the providers themselves. We can only persuade them to proper performance and attention to the quality of their teachings through mechanisms of gathering feedback from users and reflecting them on the providers' pages," "What we observe is that in most educational startups, the educational content does not sufficiently align with the needs, goals, motivations of the age groups of their users," "Producing suitable educational content and designing and producing high-quality educational products or providing quality educational services is a very time-consuming process, and sometimes we witness symbolic acts in educational startups that place the quality of education under a big question mark," "Owners of educational startups cannot act like a school principal or educational institute manager and continuously assess and supervise the capability and performance of their teachers," "Mostly, the main expertise of the founders and core team of educational startups in Iran is in information and communication technology and programming, and they are not experts in the field of education."

Challenges and obstacles related to government laws and policies: The role of the government in fostering entrepreneurship is to create an environment that supports entrepreneurship and facilitates their success in the risky process of creating and developing entrepreneurial businesses. Unfortunately, many entrepreneurs in Iran face obstacles and challenges such as changes in government policies, implementation of discretionary policies, instability of government managers and employers, the existence of inappropriate and non-supportive laws, and similar issues, creating unfavorable conditions for launching and managing a business (Azimi Delarestaghi et al., 2019). In the field of education, founders of startups in the educational sector also face numerous challenges, including the lack of government support until becoming creative and knowledge-based companies, legal view of startups similar to large companies by government agencies in carrying out legal/ tax/ social security duties, difficulty and lack of transparency in the process of obtaining trade licenses, legal gaps in relation to the activities of educational startups, and ultimately the lack of a body for evaluating and supervising the products/services of educational startups. They stated: "Many times, startups fail due to existing problems in the licensing process," "The ambiguity of the stages and the process of obtaining licenses on one side and the demands of various organizations regarding licenses they themselves do not know how to obtain are very annoying," "Legal issues and the fact that educational startups are not covered by any

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of the laws and regulatory bodies for educational centers cause confusion and perpetual inadequacy of a startup's licensing foundation," "If we look at the deterrent factors, obtaining the e-Namad (electronic trust seal) and licenses, problems related to social security and taxes, and the fact that a business that has not yet made a profit but has to pay taxes or deal with social security troubles are among the biggest problems for educational startups," "The most painful problem for us was the law on value-added tax and direct tax on incomes. Imagine in the first year we had revenue, our total profit did not reach twenty million tomans, yet we were taxed twenty-five million. We had not even registered the company yet, but we were taxed based on bank transactions and financial turnover," "Obtaining a license for educational startups is an impossible task and has become one of the permanent and enduring problems for startups in the education sector. Practically no authority responds to requests for trade licenses for these types of businesses," "If you want to get a gateway, you need to have e-Namad. If you want to use gateway providers that used to be possible but is not anymore, you need e-Namad. You go to get e-Namad, they say you need a license. You go to get a license, they don't tell you from where and which authority should give you the license. They refer you to the Ministry of Education, the Ministry of Education says go to Technical and Vocational Training, Technical and Vocational Training says go to Higher Education, and they keep sending you around. You don't know from where you can get a license. You go to the Virtual Businesses Union, they say we don't give it. You go to Digital Media, they say first produce your educational products and videos, get an ISBN, then bring it, we will approve it. You go to get an ISBN, you become miserable and they don't give it. That is, the complexity of licenses unfortunately has completely troubled educational businesses and especially online and startup education have much more problems in this regard," "The lack of government solutions to support startups that are still at the beginning and have not been able to become creative or knowledge-based, and seeing them as large institutes or companies with the expectation of paying taxes, fulfilling legal obligations like large companies is a big problem, and this issue has been the cause of the failure of many of them."

Challenges and obstacles related to human capital management: Human capital management is one of the biggest challenges for startups, but success in it will lead to success in the business (Rahimi et al., 2021). In the field of educational startups, founders face significant challenges in attracting, retaining skilled, creative, and capable personnel due to financial constraints and being a startup. These challenges include relying solely on team members without necessitating confidentiality agreements, neglecting team morale, insufficient effort and commitment to a common goal in team building, team and employee expertise, knowledge, and experience being insufficient or unrelated to education, the absence of educational experts in startup teams, and entrepreneurs' inability to align team activities and employees. Their comments in this area include: "One of the problems that educational startups may face from the beginning is finding experts who can work in various areas for the startup or team, but often experienced and renowned experts do not take the risk and work with startups. They prefer working with large companies and institutions where their work is less risky and enhances their resume," "Educational startups usually offer non-formal and skill-based training in the form of educational content, where innovation, creativity, and quality of education are important. Thus, attracting creative, skilled, and expert human resources or educators is one of their challenges," "Trusting people who join the team and become privy to all details and information of the business without creating a legal commitment can lead to the failure of the educational startup at any stage," "There are two big reasons why startups cannot hire skilled labor, whether it be educational content providers, programmers, marketing experts, etc. The first reason is the startup's novelty, lacking a legal background and portfolio, which discourages skilled professionals from collaborating. The second is that startups do not have the capital to hire skilled labor because their financial resources are limited in the early stages, except for teams that start with good financial backing," "Attracting skilled human resources or educators is one of their challenges," "Attracting skilled human resources, especially in programming, is very important to them. Overall, attracting and retaining skilled and committed human resources is one of the big challenges for startups, especially in education," "If the team is not well-formed, or if a proper and fair contract is not made with team members before starting work, or if the entrepreneur cannot align team members in a specific direction with a common goal, all can easily be the main factors in the failure of the entire business."

Challenges and obstacles related to technical infrastructure: The first important principle in the development of startup entrepreneurship is creating and developing suitable technical infrastructure and technological platforms for offering services and products in

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various sectors, which leads to differentiation, competitive ability, accelerated service delivery, increased productivity and efficiency, and the provision of innovative services (Agarwal & Sambamurthy, 2020). Based on this, it is necessary to identify the challenges in this area and take necessary actions to address them. Founders of educational startups have identified five major obstacles related to infrastructure and technical platform delivery challenges, limited internet bandwidth, poor internet quality, hardware and software limitations, server, hosting issues due to sanctions, and creating and providing a distribution platform for education, focusing on the type of technical platform used in their business area. They stated: "Problems related to internet bandwidth and service delivery by internet service companies and hosting and server companies have become a problem for internet businesses, which was not the case in the past," "Another obstacle is the weak internet infrastructure and bandwidth, which is still one of our challenges and hinders the process of conducting courses and webinars," "The existing infrastructure in the country, bandwidth, internet quality, internet costs, and the inability to purchase and equip suitable servers for hosting websites and applications are also challenge factors," "Problems related to internet outages and poor quality, bandwidth limitations, threats related to the implementation of the protection plan are all big obstacles and challenges in the way of launching startups and hinder their growth and development in the country."

Challenges and obstacles related to environmental factors: Environmental factors are one of the important indicators in establishing entrepreneurship in businesses, and the presence of numerous obstacles and challenges in this area, especially at the beginning, can prevent the proper formation and growth of businesses (Omerzel Gomezelj & Kušce, 2013). Founders of educational startups have identified various environmental challenges in their business area, including challenges created by unpredictable political/social conditions, threats of implementing the protection plan, filtering, sanctions and exchange rate fluctuations, COVID-19 and its imposed restrictions, bureaucratic structures of schools and universities, barriers and challenges in the connection between formal education space and startups, and finally, lack of access to ecosystems and accelerators in the early stages. They have stated that: "Threats related to the implementation of the protection plan are among the big obstacles and challenges in the way of launching startups and hinder their growth and development in the country," "Sometimes the social conditions, the political conditions of society are what hinder work, we see in our country the issues of sanctions, political issues and such that exist," "COVID-19 was a huge problem for us in the part of in-person education, which I can almost say if we had not previously established the infrastructure and sections of non-in-person education, it could easily have led to the failure of the entire project and the elimination of our business," "Sometimes issues arise in society that are unbelievable and unpredictable. Like the issue of civil protests that arose and made education the last thing people thought about during those months. This issue dealt a big blow to all educational centers and most of all, educational startups suffered losses," "Exchange rate fluctuations in Iran are one of the deterrent factors and even disruptors for educational startups in the country. You can't count on anything. If a startup bases its work for users outside the country and wants to attract foreign educators and pay them in dollars, with these fluctuations, it can face failure within a few days," "Health and safety issues, as we saw in the case of COVID-19, can both create opportunities and create obstacles," "Sometimes the social conditions, the political conditions of society are what hinder work, we see in our country the issues of sanctions, political issues and such that exist. Those who want to do startup work in education have many limitations," "The issue of nepotism within the ecosystem, this rent-seeking and relationships that cause capable and efficient startups to remain hidden and unable to become prominent, while those who don't solve anyone's problem become famous quickly because of their connections with key individuals, become knowledge-based, and receive low-interest loans."

In general, the results of this study can be a practical guide for founders of educational startups to anticipate the obstacles and challenges of launching their business; thus, they can prepare themselves to face possible obstacles, challenges, and problems, and with a managed and effective performance, they can reduce threats and turn them into opportunities. Additionally, the results of this study can be a roadmap for our country's policymakers and legislators to adopt better decisions and policies, as well as to reform cumbersome laws and regulations and facilitate the process of obtaining activity licenses and legal obligations, reducing and addressing the obstacles in launching educational startups.

Authors' Contributions

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All authors have contributed significantly to the research process and the development of the manuscript.

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

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Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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