Education Insights

Article

Reframing Innovation and Entrepreneurship Education through Educational Space; A Study from Afghanistan

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Abstract: Innovation and entrepreneurship education (IEE) has emerged as a promising approach to alleviate youth unemployment and foster economic growth in conflict-affected countries like Afghanistan. However, the effectiveness of conventional approaches to entrepreneurship education in developing entrepreneurial self-efficacy and passion among learners has proven meager. Grounded in the spatial theory of learning, this study investigates the role of reconfigured learning spaces blending Knowledge Space, Simulated Learning Space, and Real Entrepreneurial Space in developing entrepreneurial self-efficacy and passion among Afghan learners. Utilizing a qualitative and conceptual approach, the research methodology involves an extensive review and synthesis of literature on entrepreneurship education, spatial learning theory, and post-conflict educational development. The study proposes a three-dimensional model of entrepreneurship education and examines the impact of various educational spaces on the entrepreneurial learning process. Findings suggest that conventional classroom settings, characterized by hierarchical power structures, rote learning, and limited market interaction, inhibit the development of entrepreneurial identity and innovative thought processes. Conversely, spatially diversified learning settings, integrating theoretical knowledge, entrepreneurial practice, and market interaction, significantly enhance learners' entrepreneurial self-efficacy and passion. Furthermore, alternative learning environments such as community education programs, virtual platforms, and entrepreneurial ecosystems provide greater opportunities for marginalized populations, particularly rural and female learners. This research contributes to the literature by offering a spatial perspective on entrepreneurial learning in fragile and post-conflict economies, providing a unique framework for redesigning educational policies in Afghanistan and other developing nations.

Keywords: entrepreneurship education; educational space; entrepreneurial passion; self-efficacy; spatial learning; afghanistan

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1. Introduction

Research Background and Problem Statement: The subject of innovation and entrepreneurship education (IEE) is quickly becoming a focus of government policies in Afghanistan to ensure that the demographic dividend is maximized, the conditions of chronic youth unemployment are ameliorated, and the country is transformed from being aid-dependent and agrarian to being more innovation-driven in terms of economic growth and development. Considering the fact that the country has around 63% of the population below the age of 25, with around 400,000 young people joining the workforce every year, many of them being uneducated and under-employed, education has been recognized as the major tool to change human capital to improve the country's competitiveness and ensure sustainable peace. The fact that nearly 200,000 students

graduate from high schools every year, with around 120,000 of them being unemployed and under-employed, creates difficulty in maximizing the potential to change human capital to become more entrepreneurial to address the challenges being faced in the present-day labor market. In this respect, the number and variety of courses and programs related to entrepreneurship have increased in universities, technical and vocational education and training institutions, and secondary schools in Afghanistan over the past decade. For instance, the Tashabos program in entrepreneurship reached 44,000 students in 43 schools in four provinces in Afghanistan, and the program for the development and implementation of the entrepreneurship curriculum reached 10,000 youth in the country. Moreover, the policy discourse in the country highlights the importance of innovation, creativity, recognizing opportunities, ethical leadership, and technological adaptability as the desired educational outcomes in the country. However, the reality is quite different as the overall outcome of IEE in the country is found to be quite low in terms of the entrepreneurial intentions and innovative behavior of the graduates, as well as their overall entrepreneurial passion. The major cause of this discrepancy is the teaching paradigm used to teach IEE. The existing paradigm for teaching entrepreneurship education in Afghanistan is based on a classroom mode of teaching with lectures on theoretical knowledge, a structured curriculum, and examination-based assessment methods. Under the existing paradigm, entrepreneurship is perceived as a subject for learning, not as a practice for doing. Business plans are hypothetical; there is limited interaction with the markets; and learning is not context-bound to the socio-economic and conflict-ridden environment within which entrepreneurship takes place. This is in direct contrast to the reality of entrepreneurship as a lived practice, which is experiential, context-embedded, and full of uncertainties. The traditional classroom environment also adds to the constraints for entrepreneurship education. The organized classroom environment with its own set of classroom hierarchies, the presence of authority in the classroom in the form of the teacher, and the traditional classroom environment of rote learning and obedience, which have long been ingrained in the education systems in Afghanistan, tends to promote passiveness, avoidance, and fear of failure. These are the classroom conditions that allow for very little advancement in innovation capacity and the formation of entrepreneurial identity, particularly for rural, female, and disadvantaged students who have to deal with more cultural and social barriers as well. While the research on IEE in Afghanistan continues to be mostly about curriculum development, policy alignment, and teacher training as per the existing research, the research on the active role of educational space in IEE continues to be relatively less explored in the existing research. Nevertheless, from the research in human geography and the research in the learning sciences over the years, it has been increasingly recognized that space is no longer merely a container for learning; instead, space becomes increasingly complex in terms of factors such as interaction patterns, constructs of relations of power, epistemological constructs, and identity constructs in the context of learning insofar as the learning space itself increasingly determines learning. The lack of attention to spatial issues in IEE policy and practice also has implications for the continuation of the mismatch between intended and actual outcomes of entrepreneurship education in Afghanistan. Although attention to content improvement was emphasized, little attention was paid to spatial issues in relation to the spaces in which entrepreneur learning was conducted. There are, however, implications of learning and innovation in new spaces of learning, as indicated by experience from alternative education projects, including in fragile states and in Afghanistan, such as mobile learning, ICT education for young entrepreneurs, agricultural innovation systems with SMS technology, and community college education with work-based learning, which indicate that spaces of learning determine processes of learning, as indicated by context-sensitive and practice-oriented learning, even in difficult conditions [1]. This paper attempts to fill this gap by reconceptualizing the meaning of innovation and entrepreneurship education by means of an educational spatial perspective. A spatial model of IEE based on a three-dimensional spatial framework of Knowledge Space, Simulated Learning Space, and Real

Entrepreneurial Space is developed, with the flow of the learner through these interconnected spaces being at the heart of the formation of entrepreneurial capability and identities. By reconceptualizing entrepreneurial passion as a spatial, identity-based concept that is formed by means of actual experiences as opposed to abstractions, this research provides a contextual basis for the formation of IEE in Afghanistan [2, 3]. By exploring these issues of national policy debates, this paper also attempts to contribute to the new body of literature on experiential, ecosystem-based IEE that is being developed in the context of developing countries. At the same time, the issues of concern that are being investigated in this paper are also explored from the following perspectives:

RQ1: In what ways does the progression of Afghan learners through the three-dimensional spatial framework of Knowledge Space, Simulated Learning Space, and Real Entrepreneurial Space shape the formation of entrepreneurial self-efficacy and entrepreneurial passion among Afghan youth in the post-conflict context?

RQ2: In what ways do the socio-material constraints of conventional classroom-based entrepreneurship education in Afghanistan, such as rote learning, hierarchical authority structures, and the absence of market interaction, limit the formation of entrepreneurial identity, and how does the spatial reconfiguration of entrepreneurship education address such limitations for marginalized groups, such as rural and female students?

RQ3: In what ways do alternative learning spaces, such as mobile learning, ICT learning, and community college work-based learning, shape context-sensitive and practice-oriented entrepreneurship education in Afghanistan, and what are the implications for scaling up such spatial innovations within the national IEE policy framework?

2. Conceptual Foundations of Educational Space

The concept of "space" in education has evolved significantly, transitioning from being a mere backdrop to becoming an integral component of the learning process. To better understand the spatial transformation within Innovation and Entrepreneurship Education (IEE), it is essential to explore the theoretical foundations of "space" in education, as illustrated in figure 1. Without addressing these theoretical underpinnings, directly linking spatial transformation to IEE may lead to misunderstandings [4, 5]. Figure 1 presents a conceptual model of three-dimensional educational space, emphasizing the interaction between "Knowledge Space," "Simulated Learning Space," and "Real Entrepreneurial Space" as elements of the "Learning Environment." This model posits that active learning necessitates movement between these three "spaces" and that such transitions can be facilitated by thoughtfully designed learning environments [6–8].

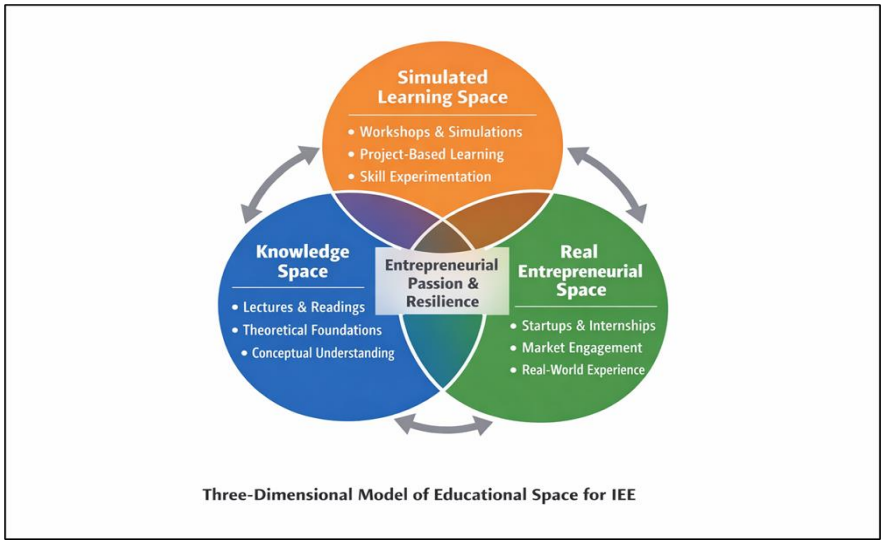

Figure 1. Three-dimensional model of educational space; Source: Authors own work.

2.1. From Physical Container to Socially Constructed Agent

Traditionally, the educational space in Afghanistan was equated with architectural structures such as madrassas, schools, or universities. These spaces were perceived merely as containers or contexts where education and learning occurred passively. This perspective has been deeply embedded in traditional educational establishments in Afghanistan. The classroom design reflects a paradigm optimized for one-way transmission of knowledge, aligning with a batch-processing model of education. The passive nature of this learning process has been challenged by critical geography and socio-cultural models, which argue that space is not neutral but rather a product of societal interactions and is continuously reshaped by them. The hierarchical arrangement of desks facing the lecturer symbolizes a power dynamic, where knowledge flows unidirectionally from the teacher to passive recipients. This spatial arrangement is further influenced by cultural norms in Afghanistan, which emphasize deference to lecturers and a testing regime that rewards rote memorization and reproduction of knowledge [9–11]. Such an environment fosters "pedagogical obedience," reinforcing the notion of knowledge as something possessed by the teacher and learning as a process of replication. For entrepreneurship education, which requires counterintuitive thinking and high self-efficacy, this traditional space-based pedagogy is counterproductive [12–14].

2.2. Dimensions of Educational Space

The four dimensions of educational space are interconnected. The physical-geographic dimension encompasses architecture, furniture, technology, and materials, which can facilitate certain educational activities while constraining others. The digital-virtual dimension extends learning beyond physical boundaries through online platforms, mobile devices, and virtual collaboration spaces, offering opportunities to democratize learning while potentially reinforcing existing power dynamics. The social-relational dimension focuses on the interactions among learners, teachers, and external practitioners, which may vary from hierarchical to collaborative structures. Lastly, the affective-psychological dimension pertains to feelings of security, empowerment, and motivation, which are essential for fostering creative confidence and encouraging entrepreneurial risk-taking [15, 16].

2.2.1. Physical Geographic Dimension

This includes the physical or material world of architecture, furniture, technology, and geography itself [12, 17]. In Afghanistan, there are significant disparities in the physical or material dimension of geography. While certain infrastructures exist in urban cities such as Kabul, many educational institutions in rural and remote areas lack essential facilities. This physical geography can either enable or hinder specific activities. For instance, a room equipped with movable furniture and chalkboards on three walls facilitates design thinking activities, whereas a room with fixed furniture is more suited to traditional lectures. The absence of adequate facilities means that even when entrepreneurship education is available, it is constrained by the lack of physical spaces conducive to interactive and student-centered learning approaches. Furthermore, the disparity in infrastructure between urban and rural areas creates additional barriers to learning in rural regions, where resources are far less developed compared to urban counterparts [18, 19].

2.2.2. The Digital-Virtual Dimension

This dimension has grown over time due to various international efforts aimed at modernizing the education system in Afghanistan. Examples of digital encounters include the use of online learning management systems, mobile technology for delivering education, online collaboration tools, and digital literacy initiatives facilitated by international development agencies. Such approaches may enable the democratization of education through asynchronous learning and new opportunities, particularly in a country where physical access to education is hindered by geographic and security-related challenges. However, research indicates that digital engagement in Afghanistan is

primarily utilized as a tool for information dissemination, such as uploading lecture notes in PDF format or using video lectures, which often replicate the teacher-centric model prevalent in physical classrooms [18, 20]. The digital or virtual dimension has the potential to either reinforce or challenge hierarchical classroom structures, depending on the learning objectives established by the digital platform and the extent to which such technologies are integrated into entrepreneurship education to promote interactive and student-centered learning, rather than passive knowledge consumption.

2.2.3. Social-Relational Dimension

This refers to the patterns of social interaction, communication, or relatedness influenced by spatial arrangements. The traditional classroom environment in Afghanistan reflects a specific social dynamic, where the teacher is regarded as the knowledgeable authority and the student as the learner. This dynamic is deeply rooted in cultural values emphasizing hierarchical respect and obedience. The teacher-student relationship is often shaped by a pedagogical approach focused on memorization and reproduction of knowledge, leaving limited room for critical thinking and collaborative learning. In contrast, entrepreneurial learning fosters a more horizontal teacher-student relationship, emphasizing networking, relational engagement, and mentorship. Innovation hubs or project-based learning spaces aim to create alternative social structures that encourage teamwork and networking beyond traditional boundaries. However, the development of such spaces in Afghanistan faces significant challenges due to social norms and restrictions that limit cross-gender collaboration and women's participation, particularly in rural areas. Furthermore, the absence of mentorship programs and weak connections between educational institutions and the business sector hinder the establishment of horizontal social relationships, which are crucial for advancing entrepreneurship education. The ongoing conflict and insecurity in the region also adversely affect the stability required for peer-to-peer interactions and community-based entrepreneurial learning.

2.2.4. The Affective-Psychological Dimension

Space also has an affective dimension; it has the capacity to influence learners, creating environments that can make them feel secure or insecure, motivated or demotivated, empowered or disempowered. The high-risk, exam-focused environment typical of Afghan learning spaces, exacerbated by decades of conflict, instability, and social change, often fosters risk-averse behaviors and stifles the creativity necessary for entrepreneurial development. The persistent atmosphere of uncertainty and insecurity in many regions has been shown to create psychological barriers for students, who tend to prioritize stability and survival over innovative risk-taking. Furthermore, the emphasis on rote memorization and exam success, combined with limited opportunities to practice and apply knowledge, can generate anxiety rather than fostering creativity. Spaces designed for experimentation, such as innovation labs or practical training environments, can incorporate architectural features that support "learning through failure," providing psychological safety for innovation. However, such spaces are rare in the Afghan educational context, and even when available, they often struggle to overcome entrenched learner mindsets shaped by traditional, authoritarian educational practices that equate failure with shame rather than learning [21–23]. For women learners, the affective challenges of educational spaces are further compounded by gender-based restrictions, which can evoke feelings of exclusion, anxiety, or inadequacy. These factors can negatively impact their self-efficacy beliefs, which are critical for cultivating entrepreneurial intentions.

3. Spatial Innovation in Afghan Education: Alternate Models

The evolving educational landscape in Afghanistan represents a critical yet underexplored aspect of rebuilding and developing human capital in a country affected by prolonged conflict [24–26]. While decades of instability and social upheaval have severely impacted physical infrastructure and traditional educational systems, these

challenges have also created opportunities for innovation and reimagining educational spaces. This section examines key developments in spatial innovation within Afghan education, including the emergence of non-formal learning environments, the integration of digital platforms that overcome physical limitations, and the establishment of entrepreneurial learning spaces that challenge conventional educational hierarchies. These alternative models aim to address significant challenges in Afghan education by leveraging international best practices and local resources to foster creativity, critical thinking, and entrepreneurial skills among learners.

3.1. Non-Formal and Community-Based Learning Environments: Reimagining Space Beyond the Traditional Classroom

The destruction of formal educational infrastructure has paved the way for innovative educational models that transcend the conventional concept of school buildings. In Afghanistan, access to formal education is often hindered by geographical, security, and cultural barriers, particularly for women and girls. These educational innovations draw from the rich traditions of the Afghan people, who have historically received education through systems such as the Madrassa and Quranic schools. Modern initiatives have evolved significantly from these traditional models, introducing entrepreneurship-based educational programs conducted in non-formal spaces to address the needs of underserved populations, including women in rural areas, returnees from refugee camps, and internally displaced individuals. Community-based education programs represent a fundamental shift in educational spaces, utilizing community structures such as mosques, homes, and community centers to create temporary or semi-permanent learning environments. These spaces differ from traditional classrooms by incorporating flexible seating arrangements that encourage peer interaction and collaborative learning, which are essential for entrepreneurship education [27, 28]. Such settings foster horizontal social dynamics that support networking and peer engagement. The affective dimension of these spaces is also significant, as they provide psychological safety through familiar social settings and community facilitators, rather than authority figures, which helps build creative confidence. Additionally, the integration of digital and virtual tools has expanded opportunities, with mobile technology enabling access to learning programs in insecure or remote areas. Smartphones and tablets are increasingly used for entrepreneurship education, financial literacy, and market information. However, challenges remain, including inadequate facilitator training, poor physical environments, and reliance on uncertain international donor funding. Despite these issues, non-formal learning environments have demonstrated that quality entrepreneurship education can be achieved in diverse physical settings when social, affective, and pedagogic dimensions are effectively managed. These lessons are valuable for the future rebuilding of Afghanistan's educational system.

3.2. Digital-Virtual Learning Spaces: Transcending Physical Constraints Through Technology

The use of digital technologies in education represents a significant spatial innovation, offering the potential to overcome damaged physical infrastructure and distribution challenges through digital-virtual learning spaces that provide access to educational resources otherwise unattainable. This environment is characterized by stark contrasts, with rapid growth in mobile phone penetration and internet access in urban areas enabling technology-driven learning. However, disparities persist between urban and rural regions, as well as among different socio-economic groups and genders, potentially exacerbating educational inequalities. International development agencies have played a key role in advancing digital technologies to reach remote populations and support online learning platforms and digital literacy initiatives. The COVID-19 pandemic further accelerated the adoption of digital technologies, although it also brought significant challenges to the country. Digital-virtual spaces fundamentally alter the relationship between physical location and educational access, enabling learners from diverse backgrounds to participate in courses. This is particularly valuable for entrepreneurship education, which benefits from diverse perspectives, market

information, and networking opportunities not locally accessible. Despite these advancements, digital engagement often reinforces traditional pedagogies rather than transforming them, with technologies frequently used for information transmission rather than fostering collaborative and experiential learning. The social-relational dimension of digital technologies is complex, requiring sensitivity to cultural norms such as hierarchical respect and gender segregation. In traditional societies, cross-gender interaction in digital environments is often deemed inappropriate or unsafe for women, necessitating the design of gender-segregated participation, anonymous contribution, and asynchronous interaction to align with local cultural requirements while promoting collaborative entrepreneurial learning. Psychological factors must also be considered, as digital spaces can evoke feelings of anxiety, confusion, and inadequacy rather than empowerment. Effective digital learning environments should incorporate elements of human connection through local facilitators, cohorts, and instructors. Emerging approaches to digital learning include mobile learning projects that leverage the accessibility of smartphones to deliver entrepreneurship content via video lessons, quizzes, and SMS discussions, as well as blended learning models that combine face-to-face facilitation in community settings. However, physical challenges such as lack of electricity, internet connectivity, and appropriate devices in rural and displaced communities highlight the digital divide, which mirrors social inequality and risks excluding those most in need of opportunities. Addressing this divide requires partnerships, community technology centers, and low-bandwidth solutions. Future educational development must move beyond merely digitizing traditional pedagogies toward transformative approaches that leverage technology to create new learning opportunities. This involves investing in training programs for digital pedagogy, interactive content sensitive to local culture, and policy support to improve infrastructure, teacher education, and socio-cultural environments. Entrepreneurship-focused educational spaces challenge traditional pedagogical hierarchies by fostering creativity, collaboration, and risk-taking attitudes essential for entrepreneurial success. With decades of conflict impacting traditional employment opportunities, Afghanistan's young population and informal economy present both a necessity and an opportunity for promoting entrepreneurship education. International organizations have contributed to integrating entrepreneurship education into school curricula and training programs, supporting the development of skills essential for economic resilience and growth.

4. Entrepreneurial Passion as a Spatially Embedded Construct

Entrepreneurial passion, defined as the intense positive feeling experienced through engagement in entrepreneurial activities that are meaningful and salient to one's identity, has emerged as a critical factor in understanding entrepreneurial motivation, persistence, and success. Traditionally conceptualized as an individual psychological trait, recent scholarship increasingly recognizes entrepreneurial passion as a socially and spatially embedded phenomenon, shaped by the physical, digital, social, and cultural contexts in which entrepreneurs live and work. This reconceptualization is particularly relevant to Afghanistan, where decades of conflict, rapid social change, and international development interventions have created unique spatial configurations that profoundly influence how entrepreneurial passion is experienced, expressed, and sustained. This section examines entrepreneurial passion in Afghanistan through three interrelated dimensions: the physical spaces that enable or constrain passionate engagement, the social-relational networks that cultivate and channel passion, and the cultural-affective atmospheres that legitimize or delegitimize entrepreneurial identity.

4.1. Physical Spaces of Passion: Incubators, Markets, and Domestic Enterprises

In Afghanistan, physical spaces for entrepreneurial activities are unique, shaped by an environment of conflict, underdeveloped infrastructure, and uneven development. These spaces can foster entrepreneurial passion and drive. Entrepreneurship incubators and innovation centers, supported by international organizations, aim to create

environments that encourage entrepreneurial identity. These spaces often feature open layouts distinct from traditional Afghan business settings, which can inspire entrepreneurial enthusiasm and alignment with global entrepreneurial culture, particularly among Afghan youth and women.

However, these incubators are primarily located in urban areas and are often inaccessible due to geographical challenges, security concerns, and cultural barriers related to mobility. Consequently, much of the entrepreneurial passion is cultivated in traditional markets, small workshops, vending spots, and home-based businesses. Domestic spaces play a crucial role in enabling entrepreneurial activities for women, as they provide culturally acceptable environments for conducting business [29–31]. Nonetheless, challenges such as limited access to markets persist. Digital spaces have also emerged as important platforms for entrepreneurial activities, offering opportunities for communication and connection to global entrepreneurial networks.

4.2. Social-Relational Networks: Mentorship, Peer Communities, and Family Embeddedness

Entrepreneurial passion does not simply emerge but is cultivated, maintained, and channeled through social-relational networks that offer validation, resource access, and identification. In the context of Afghanistan, where institutional support for entrepreneurship remains limited and social capital is often the primary resource available to entrepreneurs, the importance of networks in the formation and sustenance of entrepreneurial passion cannot be overstated. Mentorship plays a significant role in fostering entrepreneurial passion, not only by providing knowledge and advice but also through emotional support, validation, and the transmission of entrepreneurial values and aspirations. However, the spatial dimension of mentorship in Afghanistan presents challenges. For instance, mentorship relationships must be long-lasting and based on trust, which can be difficult due to cultural and linguistic gaps between international mentors and Afghan entrepreneurs, as well as gender gaps between male mentors and female entrepreneurs. Successful mentorship programs in Afghanistan have addressed these challenges by identifying and training local mentors to overcome spatial-cultural barriers and enhance the emotional intensity required for passionate engagement [32, 33].

Another important social-relational context in which entrepreneurial passion is embedded in Afghanistan is peer communities. The social isolation of individual entrepreneurs, whether due to geographical, security, or cultural barriers, can weaken the passion required for entrepreneurial activities when faced with the difficulties associated with entrepreneurial development. Entrepreneurship education programs and entrepreneurial incubation spaces have therefore emphasized the development of peer learning communities as a means of promoting entrepreneurial passion. Such communities foster strong affective experiences of belonging and shared identity, helping sustain entrepreneurial passion even during challenging times. For women entrepreneurs, peer learning communities provide validation and encouragement, enabling them to overcome skepticism or opposition they may encounter within their families while pursuing entrepreneurial activities. The role of the family is complex in the social-relational embedding of entrepreneurial passion in Afghanistan. Unlike Western contexts, where entrepreneurship is often seen as an individualistic deviation from family expectations, entrepreneurship in Afghanistan is frequently deeply embedded within the family structure. Families can provide vital capital, workforce, and market connections for entrepreneurial activities, but they can also limit the risk-taking and time investment required for passionate entrepreneurship [21, 34]. The spatial organization of Afghan families, including co-residence among kin members, gender separation, and collective decision-making, plays a critical role in shaping entrepreneurial passion. Effective entrepreneurship education in Afghanistan must consider the role of the family, working in alignment with the spatial-social organization of the family rather than against it.

The digital-virtual dimension has opened new avenues for social-relational support in fostering entrepreneurial passion by enabling connections beyond physical proximity and cultural barriers [35–37]. Online communities of Afghan entrepreneurs, diaspora

networks, and international entrepreneurship forums provide alternative sources of validation and support that may not be locally available. However, the affective dimension of digital connections differs from physical interactions, potentially offering breadth at the expense of depth and trust. The most effective form of social-relational support for entrepreneurial passion in Afghanistan appears to be a combination of digital connections and face-to-face interactions. These "blended communities" integrate the accessibility of the digital-virtual space with the depth of physical co-presence, creating a balanced approach to sustaining entrepreneurial passion.

4.3. Cultural-Affective Atmospheres: Legitimacy, Identity, and the Emotional Politics of Entrepreneurship

The last dimension of spatial embedding relates to the cultural-affective atmospheres in which entrepreneurial activity takes place in Afghanistan. These include the shared meanings, feelings, and evaluations through which entrepreneurial identity is constructed as legitimate or illegitimate, possible or impossible, desirable or undesirable. These cultural-affective atmospheres are not the private feelings of individuals but are collectively shared and experienced, moving through the spaces of Afghan society to have a profound effect on the construction of entrepreneurial passion. The cultural significance of entrepreneurship in Afghan society has undergone substantial changes over the last several decades, but these changes have not been experienced uniformly across different social groups. Historically, the social standing of commercial activity in Afghan society has been relatively low compared to land ownership, religious scholarship, or military leadership. The merchant or trader, while essential for the economy, is not a socially prestigious occupation. However, decades of conflict, the decline of traditional ways of living, and the arrival of international development assistance have also given rise to new cultural spaces in which the celebration of entrepreneurship as a form of economic survival, reconstruction, and modernity is possible. Indeed, international development discourse has had a significant impact in the cultural revaluation of entrepreneurship as a virtuous practice linked to innovation, self-reliance, and modernity. For young Afghans, especially those exposed to urban education and media, these new cultural-affective associations may have a strong passionate attraction to the identity of entrepreneurship. However, the cultural environment in which entrepreneurship is practiced is contested and contradictory in Afghanistan. For instance, the traditional suspicion of commerce and entrepreneurship, especially in rural areas and among older Afghans, may de-legitimize the entrepreneurial ambitions of young Afghans and their passionate commitment to the cause. Gender norms also produce a strong form of affective barriers, as the women's involvement in entrepreneurial activities may be viewed as a threat to family and social order, which may produce feelings of shame and anxiety rather than the desired positive effect, as in the case of passionate engagement. The security situation also adds a new dimension to the affective barriers, as the risks associated with the business environment in the contested areas, such as extortion, theft, and violence, may produce feelings of fear and anxiety, which may cancel the desired positive effect of passionate engagement. Entrepreneurship education and innovation environments aim to provide a safe cultural-affective environment that protects the students from these delegitimizing environments and creates the desired positive effect. Through the explicit setting of norms, the celebration of rituals of entrepreneurial achievement, and the design of physical spaces full of symbols of innovation and achievement, these programs aim to create what has been called "transformative experiential learning spaces" in which new entrepreneurial identities can be performed and taken in. The success of these programs also relies on their capacity to transcend the immediate setting of the programs to create long-term changes in the experience of the participants of the broader cultural atmospheres of Afghan society.

The role of entrepreneurial self-efficacy, which represents belief in one's ability to succeed in entrepreneurial pursuits, plays a mediating role between cultural affective atmosphere and the strength of entrepreneurial passion. Studies indicate that education in entrepreneurship can play a role in increasing entrepreneurial intention by way of self-

efficacy, which allows for the passion needed for persistence in entrepreneurial ventures. In the case of Afghanistan, cultural obstacles to entrepreneurial pursuits are substantial, as are the institutional ones, and thus affective work with entrepreneurial self-efficacy must be especially intense. The entrepreneurship education programs need not only impart knowledge but change the participants' fundamental feelings about themselves and their opportunities, instilling the confidence and optimism that fuel passionate commitment [38, 39]. The spatial politics of entrepreneurial passion in Afghanistan, therefore, involve a complex interplay of physical, social, and cultural elements. Passionate entrepreneurial engagement does not stem from the individual's psychological makeup but from the spaces that facilitate meaningful engagement, the networks that offer validation and support, and the atmospheres that legitimize the entrepreneurial subject. The spatial embedding of entrepreneurial passion is crucial for developing appropriate entrepreneurship education and support programs for the people of Afghanistan and for advancing the theoretical understanding of entrepreneurial passion in the context of conflict, social change, and institutional weakness.

5. Implications for Innovation and Entrepreneurship Education in Afghanistan

The spatial analysis of the Afghan educational system discussed in this paper has considerable implications for the development, delivery, and assessment of innovation and entrepreneurship education (IEE) programs in the Afghan context. To this end, IEE programs should not only transcend the conventional boundaries of curriculum and pedagogy but should also address the spatial aspects of the educational experience. This requires IEE program designers to consider the spatial aspects of the educational experience not merely as logistical considerations but as critical pedagogical considerations that have considerable implications for the social relations, affective experiences, and intellectual developments of the participants. Accordingly, for the Afghan context, where the conventional educational spaces overwhelmingly reflect a hierarchical pedagogy, there is considerable investment in the spatial aspects of the educational experience through the design of new spaces for the IEE experience, the reuse of existing community spaces for the IEE experience, or the design of mobile spaces for the IEE experience. Second, the cultural uniqueness of spatial production in Afghanistan requires that the IEE programs be contextualized rather than being adopted from international best practices. The cultural context of obedience to the teacher, gender segregation in movement and participation, and the embeddedness of economic activities in society need to be recognized and leveraged rather than being challenged. It could involve the creation of gender-segregated learning spaces, the use of home and community spaces for women's entrepreneurship education, and the involvement of family members to ensure the social legitimacy and acceptability of the programs. Third, the digital-virtual dimension presents opportunities and challenges for the IEE programs in Afghanistan [40–42]. Digital and virtual technologies have the potential to transcend the physical boundaries and reach Afghan learners and connect them with the global knowledge pool and market; at the same time, they could perpetuate the traditional pedagogy of hierarchy and authority, which could be detrimental to the IEE programs in Afghanistan. For effective IEE programs, it is important that such programs harness the power of technology for facilitating learning, networking, and market access through asynchronous learning, networking, and market access, and at the same time, ensure that face-to-face interaction and community building are at the heart of the learning experience, so that spatial configurations are blended between the reach and scalability of technology and the intimacy and richness of physical co-presence. Fourth, since entrepreneurial passion and self-efficacy are key outcomes of effective IEE programs, it is important that such programs explicitly address the affective and psychological aspects of learning spaces, where it is crucial for programs to create psychologically safe spaces where experimenting, taking risks, and intelligent failures are not only tolerated but celebrated, and where the traditional Afghan educational culture of examination, error-avoidance, and rote learning is replaced. This involves not only physical space design but the

building of mentoring relationships, peer learning communities, and celebratory cultures that reinforce entrepreneurial identity and passionate entrepreneurial commitment through the challenges of venture-building. Lastly, the sustainability of IEE innovations in Afghanistan will depend on the ability of the innovations to engage the broader educational and economic system. Individual islands of innovation will have little effect without connections to the broader policy environment, institutional partnerships, and the market system to enable the graduates to utilize their entrepreneurial skills. This will involve advocacy for educational policy reform, the establishment of university-industry linkages, and the creation of a financing system and a conducive regulatory environment for entrepreneurship. The international development agencies, which have dominated the educational and entrepreneurship sectors in Afghanistan, will have to transcend the project approach to capacity building to enable the Afghan educational system to sustain the spatial innovations in IEE over the long term. The rebuilding of Afghan education after decades of conflict represents an unprecedented opportunity for fundamental rethinking of the design and experience of learning spaces. By acknowledging that space is not merely a passive backdrop for educational quality, but rather an active constituent of it, which shapes social relations, emotional experiences, and the possibility of entrepreneurial identity, it is my hope that policymakers, educators, and development specialists can help create an educational system that cultivates creativity, critical thinking, and entrepreneurialism within all Afghan learners, laying the groundwork for economic and social growth in the years to come.

6. Conclusion

The present study highlights spatial reconfiguration as a critical yet underexplored dimension of entrepreneurship education in post-conflict settings such as Afghanistan. The progression of learners through Knowledge Space, Simulated Learning Space, and Real Entrepreneurship Space underscores that entrepreneurial self-efficacy and sustained passion are not solely fostered through abstract knowledge transmission but through a spatial journey from conceptual understanding to practical application. Learners who navigate this three-dimensional framework not only acquire essential knowledge and skills but also develop adaptive confidence to address the uncertainties inherent in institutional and market environments. The socio-material limitations of traditional classroom settings, characterized by rote learning, hierarchical structures, and market disconnection, are shown to inadvertently reinforce marginalization rather than challenge it. For rural and female learners, these spatial constraints have been particularly restrictive, hindering the formation of entrepreneurial identities by limiting access to legitimacy practices, peer validation, and market feedback. The findings emphasize that spatial justice is central to educational reform, advocating for the transformation of learning environments to enable horizontal knowledge exchange, experiential practice, and community-integrated market engagement, thereby democratizing opportunities for marginalized groups. Furthermore, the study explores alternative learning spaces, including mobile initiatives, ICT programs, and community college-based work-based learning, which are organically emerging within Afghanistan's fragmented educational landscape. These approaches demonstrate significant potential for scaling but require careful integration into the national Incubation and Entrepreneurship Education policy framework, with attention to spatial infrastructure, digital connectivity, and community ownership. The implications extend beyond the national context, offering insights for global settings where entrepreneurship education in conflict-affected and resource-scarce environments must be reconceptualized as spatial design. This approach aims to bridge the gap between abstract knowledge and practical application, peripheral participation and market integration, and survival-focused efforts and sustainable entrepreneurship.

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