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Building a Student-Led Entrepreneurial Society in a Pakistani Medical School: Structure, Early Outcomes, and Lessons Learned

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Abstract

Background

Structured entrepreneurship education remains limited in many undergraduate medical curricula in low- and middle-income countries (LMICs). In Pakistan, institutional innovation initiatives have emerged, but student-led entrepreneurship programming remains relatively underdescribed.

Objective

To describe the development, organizational structure, activities, and early experience of a student-led Entrepreneurial Society established in 2023 at Aga Khan University (AKU), Karachi, Pakistan.

Experience

: The Society operates as a student-led platform for fostering entrepreneurship, innovation, and experiential learning within the Aga Khan University (AKU) community through flagship initiatives, collaborative events, industry engagements, and partnerships with student societies across AKU. Its core initiatives include Startup Bazaar, an annual student marketplace; Shark Tank, a competitive venture-pitching event; and Hustle Hub, an open workshop series focused on entrepreneurial learning and skill development. The Society is supported through a hybrid funding model comprising an institutional annual budget and revenue generated through its events. Beyond these flagship initiatives, the Society organizes visits to the Pakistan Stock Exchange and various industries, engagements with IBA CEDIR, the Student Entrepreneurial Spot, outreach activities with high schools, and interdisciplinary collaborations with student societies across AKU. These activities operate within AKU's broader innovation ecosystem, which includes the Critical Creative Innovative Thinking (CCIT) Forum and earlier student-led initiatives such as MedJack.

Conclusion

This experience describes the development and feasibility of student-led entrepreneurship programming within a medical school in Pakistan. Although participation and commercial activity provide observable indicators of engagement, educational outcomes, venture sustainability, and longer-term career effects have not been systematically evaluated. Further longitudinal assessment is required before broader applicability can be established.

Introduction

Medical education traditionally emphasizes clinical competence, biomedical knowledge, and diagnostic reasoning. However, innovation, entrepreneurship, and venture development remain relatively limited

components of many undergraduate medical curricula, particularly in low- and middle-income countries (LMICs) (1–3). In settings such as Pakistan, where healthcare delivery is shaped by resource constraints and unmet population needs, locally developed approaches to innovation may provide opportunities for students to engage with healthcare and societal challenges (3).

Career uncertainty among Pakistani medical and dental students has also been documented (4). Exposure to entrepreneurship may broaden students' professional development by introducing skills in leadership, problem-solving, and venture development alongside conventional clinical training (5–9). Such opportunities, however, should complement rather than replace the core clinical curriculum.

At Aga Khan University (AKU), entrepreneurship and innovation activities predate the establishment of the Entrepreneurial Society. The Critical Creative Innovative Thinking (CCIT) Forum, established in 2013, has supported student innovation through hackathons, an Innovation Fellowship, and health-startup-related activities (10–13). Earlier initiatives, including MedJack, have also demonstrated opportunities for medical students to engage in innovation and problem-solving (10).

Established in 2023, the Entrepreneurial Society represents a student-governed initiative within this broader institutional environment. Its distinct contribution is the integration of three complementary formats under one membership structure: a recurring marketplace, a competitive venture-pitching event, and an open workshop series (14). The Society primarily facilitates general student entrepreneurship and selected healthcare-related innovation activities; it does not currently provide structured training in physician entrepreneurship.

This commentary describes the Society's development, organizational structure, and activities during its first two years. It distinguishes observed participation and commercial activity from educational and career outcomes that remain unevaluated and considers preliminary lessons relevant to similar institutional settings.

Entrepreneurship Education in Medical Schools: A Global Perspective

Interest in entrepreneurship and innovation education in medical schools has increased, although formal programmes remain concentrated in higher-resource settings. A 2025 bibliometric analysis identified variation in the development of medical entrepreneurship education internationally, with economic constraints and limited institutional infrastructure remaining important barriers (2). Programmes in high-income countries demonstrate different approaches to innovation education, but their resource requirements may limit direct applicability in lower-resource settings (15, 16).

Across South Asia, institutional innovation centres and entrepreneurship programmes have increasingly provided opportunities for students and faculty to develop ventures. India, for example, has established medical innovation and entrepreneurship infrastructure, including the Centre for Medical Innovation and

Entrepreneurship at the All-India Institute of Medical Sciences (17). Across Africa, university-based innovation initiatives have similarly expanded, although many operate at the broader university level rather than exclusively within medical schools.

These developments indicate growing interest in entrepreneurship education across the Global South. However, differences in institutional resources, access to mentorship, funding, and innovation infrastructure require locally adapted approaches rather than direct replication of programmes developed elsewhere.

A Perspective from Our Institution

The Society was founded in 2023 by a second-year MBBS student who identified a need for greater exposure to entrepreneurship and innovation within the medical school environment. Initially small in membership and organizational scope, it progressively expanded its activities and formalized its internal structure.

The Society currently operates under one convener, two co-conveners, and a general secretary, supported by four functional departments: Events, Outreach, Media, and Strategy and Planning. Each department is led by a department lead and supported by two junior core members. This structure distributes responsibilities across dedicated teams and supports the coordination of multiple initiatives. The Society's programming comprises initiatives such as Startup Bazaar, Shark Tank, Hustle Hub and collaborative events, designed to provide different forms of engagement, from accessible educational exposure to direct marketplace participation and competitive venture development.

Startup Bazaar was introduced during the Society's first year as a one-day marketplace within the hospital and medical college quad. It provides student entrepreneurs with an opportunity to display and sell their products directly to the university community. During its inaugural year, approximately 20 student-led stalls participated, offering products and services that included artwork, clothing, food, and technology accessories (Fig. 1). Participating ventures were selected from applications based on the suitability and quality of their proposed products or businesses. In subsequent years, applications and attendance increased, eventually requiring selective allocation of stalls because of limited venue capacity. The Bazaar provides participating students with practical exposure to customer interaction, product presentation, pricing, sales, and market feedback.

Introduced in 2025, Shark Tank is the Society's competitive venture-pitching initiative. It was designed to provide students with an opportunity to develop entrepreneurial ideas, present proposals to experienced evaluators, and potentially receive financial support and mentorship. Applications were open to students across the university, including those enrolled in medical and non-medical programmes. Following screening, 11 teams were shortlisted for the final pitching competition. The finalists presented their ventures to a multidisciplinary jury comprising a cardiothoracic surgeon, an emergency medicine physician with an established interest in entrepreneurship and innovation, and a business professional with expertise in venture development. Pitches were assessed on originality, feasibility, social impact,

and commercial potential (Fig. 2). Three winning teams received cash prizes and subsequent mentorship. This extended support beyond the competition itself.

Hustle Hub was developed as a complementary initiative to extend the Society's reach through sessions open to the university community, which are delivered through in-person and online formats. Approximately five sessions have been conducted each year, with speakers from different professional and geographic backgrounds discussing practical aspects of entrepreneurship and innovation. Topics have included marketing strategy, artificial intelligence, and skills relevant to developing and managing entrepreneurial ideas. The workshop series provides an accessible platform for interaction with practitioners and other experienced speakers.

Beyond our core activities, we facilitate a diverse range of collaborative initiatives throughout the year to expose students to entrepreneurship and innovation both within and beyond the university. These include visits to the Pakistan Stock Exchange and various industries, the Student Entrepreneurial Spot, and engagements with IBA CEDIR, alongside outreach initiatives with high schools such as Nixor. We also actively collaborate with different student societies across AKU to organize interdisciplinary events, workshops, and initiatives that bring together students from diverse academic and professional interests.

Roadblocks

The Society faced several practical challenges, including limited initial membership and awareness, venue constraints as Startup Bazaar expanded, and the difficulty of balancing student leadership with a demanding medical curriculum. Limited funding and access to dedicated entrepreneurship infrastructure constrained the scale of prizes, mentorship, and programming, resulting in reliance on student leadership and voluntary support from faculty, alumni, and external practitioners. A further limitation is the absence of systematic follow-up, as participating ventures are not tracked longitudinally, and educational outcomes are not formally assessed. Consequently, the long-term impact of participation on venture sustainability and students’ entrepreneurial knowledge and skills remains unclear.

These institutional challenges occur within a broader educational and economic context. Medical curricula in Pakistan are content-intensive, leaving students limited discretionary time for co-curricular activities (18). The emphasis on clinical specialization may also influence students' willingness to invest time in non-clinical skill development (4). Dedicated seed funding, incubation facilities, formal curricular recognition, and access to investor networks remain relevant barriers to entrepreneurship in Pakistani medical institutions. Although Pakistan's startup ecosystem has developed, access to capital and mentorship remains a challenge for early-stage student ventures, particularly those in healthcare (19). Faculty engagement in entrepreneurial mentorship also requires institutional recognition and sustained support (18). These broader barriers provide context for the Society's experience but should be distinguished from challenges directly observed within the organization.

Recommendations

Our experience over the first two years suggests several provisional lessons for developing student-led entrepreneurship initiatives in medical schools, although these observations should not be considered a validated framework for replication. Revenue-generating marketplace events such as Startup Bazaar may provide an accessible platform for students to showcase ventures while supporting subsequent activities, while structured pitch competitions such as Shark Tank may benefit from multidisciplinary judging and mentorship before and after the competition. Open workshops such as Hustle Hub can complement these initiatives by providing accessible, practical exposure to entrepreneurship and innovation. At the institutional level, protected time, formal recognition of co-curricular activities, faculty mentorship, and partnerships with alumni, industry professionals, and incubation networks may help sustain engagement alongside demanding medical curricula. Future initiatives should incorporate systematic evaluation of participation, feedback, entrepreneurial knowledge and skills, and longer-term venture outcomes to determine educational effectiveness and inform adaptation across different medical school settings.

Conclusion

The Society's first two years demonstrate how student-led organizations can create structured opportunities for entrepreneurship through marketplaces, venture pitching, workshops, industry engagement, and collaborative programming. Such initiatives can complement institutional innovation ecosystems by providing students with opportunities for experiential learning, mentorship, networking, and practical engagement. However, participation and commercial activity alone do not establish educational effectiveness or long-term entrepreneurial outcomes. Systematic evaluation and longitudinal follow-up are needed to assess their impact on students' skills, professional development, and subsequent engagement in innovation. This model may be adaptable across medical and professional education settings, depending on institutional resources, support, mentorship, and local needs.

Declarations

Ethics approval and consent to participate:

Ethics approval was not sought because this study did not involve patients, human participants, human tissue, or any intervention. The manuscript describes the structure, activities, and early outcomes of a student-led entrepreneurial society within a medical school and does not involve the collection or analysis of patient or clinical data.

Consent for publication:

Not applicable. The manuscript does not contain individual-level patient information or identifiable personal data requiring consent for publication.

Competing interests:

The authors declare that they have no competing interests.

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Author Contribution

H.F. conceptualized the study, collected and analyzed the data, and drafted the manuscript. E.F. contributed to writing and reviewing the manuscript. A.I.M. contributed to the study conception, provided supervision, and critically reviewed the manuscript. All authors reviewed and approved the final manuscript.

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Availability of data and materials:

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Figures



Figure 1

Scenes from Startup Bazaar 2025, featuring student-led ventures across diverse sectors, including food enterprises, handmade crafts, artwork, and innovative products. The event provided participants with an opportunity to apply entrepreneurial concepts in a real-world marketplace, fostering entrepreneurial skill development, peer-to-peer learning, and early-stage market validation within an academic setting. All photographs were captured and shared with the informed consent of participants.



Figure 2

Scenes from the Shark Tank-style competition and an educational visit to the Pakistan Stock Exchange (PSX), which provided students with opportunities for entrepreneurial learning, networking, mentorship, and business pitch development. All photographs were captured and shared with the informed consent of participants.