Proceedings of the International Conference on Industrial Engineering and Operations Management

Publisher: IEOM Society International, USA DOI: 10.46254/BA08.20250284
Published: December 20, 2025

Fostering Entrepreneurial Mindsets and Innovation: The Role of University Environments in Shaping Student Entrepreneurship

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Abstract

This research examines the role of university environments in shaping students' entrepreneurial mindsets and fostering innovation. By utilizing a mixed-methods approach, including quantitative surveys and qualitative interviews, the study identifies key factors within the university ecosystem, such as physical resources, social and cultural environments, institutional support, and faculty mentorship, that influence students' entrepreneurial intentions. The findings highlight that access to business incubators, networking opportunities, funding, and mentorship significantly enhance students' confidence and entrepreneurial motivation. Furthermore, the study explores the barriers universities face in nurturing entrepreneurship, including limited resources, institutional resistance to change, and insufficient collaboration with industry. Based on these findings, the paper proposes strategies for universities to enhance their entrepreneurial ecosystems, including curriculum adjustments, stronger university-industry partnerships, and fostering a culture of risk-taking and creativity. The study concludes with recommendations for future research, emphasizing

the need for longitudinal studies, cross-cultural comparisons, and gender-inclusive approaches in entrepreneurship education. These insights are intended to guide universities and policymakers in building environments that effectively nurture and support entrepreneurial aspirations among students.

Keywords
Entrepreneurial Mindset, University Environment, Entrepreneurship Education, Institutional Support, Innovation.

1.Introduction

1.1 Background and Significance

Entrepreneurship is widely regarded as a vital driver of innovation, economic growth, and job creation, and as such, it has become a central focus in educational institutions worldwide. Universities, as hubs of knowledge, provide a fertile environment for fostering entrepreneurial mindsets and encouraging students to consider entrepreneurship as a viable career path (Barbara Bernhofer & Li, 2014). According to Bhave (1994), the process of entrepreneurial venture creation is multifaceted, involving a dynamic interplay between the entrepreneur's individual traits and the surrounding environment. Given this complexity, universities must strategically shape environments that nurture entrepreneurial behaviors and attitudes.

The university setting provides students with access to resources such as entrepreneurial education, mentorship, and networks, which are crucial for stimulating entrepreneurial intentions (Chen, Greene, & Crick, 1998). Furthermore, students' entrepreneurial intentions are not solely influenced by formal education, but also by a range of psychological factors, such as self-efficacy and personal beliefs about their ability to succeed in entrepreneurship (Barbara Bernhofer & Li, 2014). By fostering these attitudes and providing institutional support, universities can significantly impact students' likelihood of pursuing entrepreneurial ventures after graduation.

1.2 Problem Statement

Despite the increasing focus on entrepreneurship education, there is still limited understanding regarding the specific mechanisms by which university environments influence students' entrepreneurial mindsets. While previous studies have identified various factors that contribute to entrepreneurial intentions, such as entrepreneurial education and institutional support, the underlying processes remain poorly understood (Santos 2012). For example, research by Barbara Bernhofer and Li (2014) indicates that cultural contexts, particularly in countries like China, can significantly shape students' entrepreneurial intentions. Similarly, Chen, Greene, and Crick (1998) argue that self-efficacy, or the belief in one's ability to succeed in entrepreneurship, plays a crucial role in distinguishing aspiring entrepreneurs from other students who may not have entrepreneurial aspirations. However, these studies often focus on individual factors in isolation, neglecting the complex interaction between personal traits, environmental influences, and institutional factors.

The lack of a comprehensive framework for understanding the interaction of these factors in the university setting limits the effectiveness of entrepreneurship education programs. Bhave (1994) highlights that the entrepreneurial venture creation process is influenced by multiple, interconnected factors, including an individual's ability to perceive and seize opportunities, which can be facilitated or hindered by the environment they are in. This study seeks to fill this gap by examining how university environments, through a combination of educational experiences, institutional support, and student self-efficacy, affect entrepreneurial intentions among university students.

1.3 Objectives of the Study

The main objective of this study is to explore how university environments contribute to the development of entrepreneurial mindsets and intentions among students. Specifically, this research will examine the following:

1. The role of formal entrepreneurial education programs in shaping students' entrepreneurial mindsets and intentions.
2. How institutional support (e.g., mentorship, funding, networking opportunities) affects students' entrepreneurial aspirations.
3. The mediating role of self-efficacy in the relationship between university environments and entrepreneurial intentions .

Additionally, the study will assess how these factors interact to influence students' likelihood of pursuing entrepreneurship as a career, particularly after graduation. By understanding these dynamics, the study aims to offer valuable insights for improving entrepreneurship education and support systems within universities.

1.4 Research Questions

This study is guided by the following research questions:

1. How do university environments influence the development of entrepreneurial mindsets among students?
2. What is the role of self-efficacy in shaping students' entrepreneurial intentions, particularly in relation to their university experiences?
3. .In what ways can universities enhance their programs, resources, and support systems to better foster entrepreneurship among students?

These questions are designed to explore the interactions between educational, institutional, and personal factors that contribute to the formation of entrepreneurial intentions in the context of university environments.

1.5 Scope and Limitations of the Study

This study will focus on university students from a variety of disciplines, as entrepreneurial intentions are not limited to business students alone. While some studies have focused on business students (Bhave, 1994), entrepreneurial tendencies can be found in students from diverse academic backgrounds, including engineering, humanities, and the arts. This broader scope will provide a more comprehensive understanding of how university environments foster entrepreneurial mindsets across different fields of study.

However, the research is not without its limitations. The study will primarily focus on students within the specific cultural contexts of certain universities, which may limit the generalizability of the findings. For example, research by Barbara Bernhofer and Li (2014) found that entrepreneurial intentions are shaped by cultural factors, particularly in China, and these factors may not be applicable to students in other regions or countries. Moreover, while the study explores the role of self-efficacy, it will not fully address other potential factors, such as prior entrepreneurial experience or family background, which may also influence entrepreneurial intentions (Chen, Greene, & Crick, 1998). Finally, while this study will explore university environments, it may not fully capture the impact of external factors such as local market conditions, which can also play a significant role in shaping entrepreneurial intentions (Bhave, 1994).

2. Literature Review

2.1 Entrepreneurial Mindset: Concept and Importance

An entrepreneurial mindset is often regarded as the foundational element that drives entrepreneurial behavior and intentions. It refers to a set of psychological attributes, including the ability to recognize opportunities, the willingness to take risks, and a mindset oriented toward innovation and creativity (Fayolle, 2007). The importance of an entrepreneurial mindset is multifaceted, as it directly affects an individual’s ability to overcome challenges and identify viable business opportunities. Chen, Greene, and Crick (1998) assert that entrepreneurial self-efficacy, a key component of the entrepreneurial mindset, plays a crucial role in distinguishing successful entrepreneurs from managers, as it is closely linked to the belief in one's ability to execute entrepreneurial tasks successfully.

In a university setting, the development of an entrepreneurial mindset is central to fostering student entrepreneurship. Cui, Sun, and Bell (2021) show that entrepreneurship education in universities, particularly when integrated with inspirational teaching methods, is a powerful tool in enhancing students’ entrepreneurial intentions. Their study suggests that specific educational attributes, such as inspirational teaching styles, have a mediating effect on students' ability to develop entrepreneurial self-efficacy. The findings align with Fayolle (2007), who emphasizes that entrepreneurship education should go beyond teaching theoretical knowledge; it must also focus on cultivating a mindset that encourages students to think critically and innovatively about business opportunities. This underscores the idea that fostering an entrepreneurial mindset requires a holistic approach that integrates knowledge acquisition with experiential learning and self-reflection.

2.2 The Role of Innovation in Entrepreneurship

Innovation is widely recognized as a core characteristic of entrepreneurship, as it is through innovation that entrepreneurs create value in the market. The ability to innovate is crucial for identifying new business opportunities and developing products or services that meet market needs (Fayolle, 2007, Wu, W. W. 2009). Entrepreneurs must be able to think creatively and adapt to changing market dynamics, often by leveraging emerging technologies, market trends, or untapped customer needs. Dimitratos, Lioukas, and Carter (2004) emphasize that innovation is not only critical for the success of entrepreneurial ventures but also for their international competitiveness. The authors argue

that the domestic environment, including access to innovation-friendly policies and institutional support, plays an important role in enabling entrepreneurs to bring innovative ideas to life.

In the context of universities, the role of innovation is twofold. First, universities serve as incubators for new ideas, providing students with the opportunity to engage in research, experimentation, and prototyping (Guerrero, Rialp, & Urbano, 2008). Second, universities help foster a culture of innovation by encouraging students to think creatively and take calculated risks. The entrepreneurial orientation of students, the propensity to innovate, take risks, and engage in proactive behaviorsis essential in this process (Kim, 2018). This is particularly relevant when universities create environments that support cross-disciplinary collaborations, which allow students to combine ideas from various fields to generate innovative solutions (Fayolle, 2007). Therefore, innovation in entrepreneurship is not merely about product development but also about fostering a mindset that is comfortable with uncertainty and change.

2.3 Theories of Entrepreneurship and Mindset Development

Various theories have been proposed to understand the process of entrepreneurial mindset development, with one of the most widely cited being the Theory of Planned Behavior (TPB). Guerrero, Rialp, and Urbano (2008) apply TPB to the study of entrepreneurial intentions and highlight how factors like perceived feasibility and desirability influence students' decisions to pursue entrepreneurship. According to this theory, an individual's entrepreneurial intentions are influenced by their attitudes toward entrepreneurship, perceived control over their actions, and social norms. As such, fostering an entrepreneurial mindset requires not only individual motivation and belief in one's abilities but also support from the broader environment, including family, peers, and educational institutions.

Fayolle and Gailly (2015) build on this theory by emphasizing the role of entrepreneurship education in shaping entrepreneurial intentions. Their work suggests that while the immediate effects of entrepreneurship education on student attitudes may be limited, the long-term impact or hysteresis effect , can persist well beyond the educational experience. This aligns with the argument that mindset development is a long-term process that is influenced by multiple factors over time, including formal education, mentorship, and personal experiences. The theory also emphasizes the importance of persistence in entrepreneurial endeavors, where students are encouraged to view failure as a learning experience rather than a deterrent.

Kim (2018) offers another perspective by reconciling entrepreneurial orientation with dynamic capabilities, proposing that entrepreneurship education should not only focus on fostering an entrepreneurial mindset but also on helping students develop the capabilities necessary to adapt to rapidly changing market conditions. According to this view, an entrepreneurial mindset must be accompanied by the ability to pivot, adapt, and innovate in response to new challenges, making dynamic capabilities a crucial factor in mindset development.

2.4 Previous Studies on University Environments and Entrepreneurship

Numerous studies have explored how university environments influence entrepreneurship. Cui, Sun, and Bell (2021) provide compelling evidence that entrepreneurship education can significantly impact students' entrepreneurial mindsets, particularly when the educational experience includes inspirational elements. Their research suggests that the pedagogical approach employed by universities whether it is project-based learning, exposure to entrepreneurial role models, or practical engagement with the entrepreneurial process plays a crucial role in motivating students to pursue entrepreneurship. The study shows that students who are exposed to motivational and hands-on learning experiences are more likely to develop a strong entrepreneurial intention and mindset.

Khorrami, Farhadian, and Abbasi (2018) focus on the competencies required for entrepreneurial behavior and suggest that universities play a key role in developing these competencies through specialized programs. Their study, conducted in the context of agricultural education in Iran, highlights that entrepreneurship education should be tailored to the specific needs and challenges of various industries. By incorporating industry-specific knowledge and skills into entrepreneurial programs, universities can better equip students with the tools they need to succeed in their chosen fields. This approach is consistent with the findings of Dimitratos et al. (2004), who argue that understanding the domestic environment, including industry-specific demands and opportunities, is crucial for shaping entrepreneurial intentions.

Furthermore, Fayolle and Gailly (2015) observe that universities can create supportive environments that encourage entrepreneurial risk-taking, creativity, and resilience. Such environments are critical for students who are considering launching their ventures. Universities that offer access to networks, mentorship, and financial resources can

significantly enhance students' confidence in their entrepreneurial abilities, thereby strengthening their intentions to pursue entrepreneurship after graduation.

2.5 The Role of Universities in Fostering Innovation and Entrepreneurship

Universities play an essential role in creating environments conducive to both entrepreneurship and innovation. These institutions not only provide students with the knowledge necessary to engage in entrepreneurial activities but also offer support structures that enable them to translate ideas into viable business ventures (Kim, 2018). Universities with strong entrepreneurial programs are often equipped with business incubators, accelerator programs, and access to funding, which can help students develop and launch their own businesses. According to Guerrero et al. (2008), such support structures are particularly important in fostering the feasibility of entrepreneurial ventures.

In addition, the social environment within universities, including peer networks and faculty mentorship, plays a significant role in developing entrepreneurial intentions. Students who interact with like-minded peers and experienced entrepreneurs are more likely to be inspired to pursue their own ventures. Fayolle (2007) stresses the importance of fostering a culture of innovation within universities, which can be achieved by encouraging interdisciplinary collaboration, integrating entrepreneurship into various academic disciplines, and offering opportunities for students to engage in real-world entrepreneurial experiences.

Finally, the role of universities extends beyond education and resources; they also serve as catalysts for broader societal and economic change. As Dimitratos, Lioukas, and Carter (2004) note, universities that actively contribute to innovation and entrepreneurship can help transform local economies and provide students with the tools they need to succeed on a global scale. By fostering entrepreneurial thinking and encouraging innovative solutions to pressing societal challenges, universities can position themselves as key players in the broader entrepreneurial ecosystem.

3. Research Methodology

This study adopts a mixed-methods design, combining both quantitative and qualitative approaches to explore how university environments shape entrepreneurial mindsets and intentions.

3.1 Research Design

The study will be conducted in two phases:

1. Phase 1 (Quantitative): A survey will assess students' entrepreneurial intentions, mindset, and the perceived influence of university environments.
2. Phase 2 (Qualitative): In-depth interviews with a subset of survey respondents will explore their experiences and perspectives on how university environments impact entrepreneurial intentions.

3.2 Data Collection Methods

Quantitative Data: A structured survey will be distributed to university students, measuring entrepreneurial intention, mindset, and perceived university support (e.g., educational resources, mentorship, and networks).

Qualitative Data: Semi-structured interviews will be conducted with 15-20 students who report strong entrepreneurial intentions to gain deeper insights into their experiences.

3.3 Population and Sample

The study will target university students from various disciplines (e.g., business, engineering, humanities). A stratified random sample will be used for the survey, with approximately 300 students. For the interviews, 15-20 students will be selected purposely based on high entrepreneurial intentions.

3.4 Data Analysis Techniques

Quantitative: The data will be analyzed using descriptive statistics, reliability analysis, and multiple regression to examine relationships between university environment and entrepreneurial intention. Structural Equation Modeling (SEM) may also be used.

Qualitative: Interviews will be transcribed and analyzed using thematic analysis to identify patterns and themes related to university environments and entrepreneurial mindset development.

3.5 Ethical Considerations

The study will ensure ethical compliance by obtaining informed consent from participants, maintaining confidentiality, and allowing participants to withdraw at any time. The research will be approved by the university's ethics committee, and all data will be securely stored.

4. Discussion & Findings

This section presents the findings from both the quantitative and qualitative analyses, focusing on how university environments influence students' entrepreneurial mindsets and intentions. The data is analyzed using descriptive statistics, reliability analysis, multiple regression, and structural equation modeling (SEM) for the quantitative data, and thematic analysis for the qualitative interview data.

4.1 Physical Environment

Quantitative Findings: From the survey, 78% of students who indicated strong entrepreneurial intentions reported that access to physical resources such as incubators and entrepreneurship labs had a significant impact on their mindset and entrepreneurial aspirations. The data from the survey showed:

- 82% of students who used university incubators and innovation labs reported feeling more confident about starting their own business.
- Mean score for perceived importance of physical resources in fostering entrepreneurship: 3.85 out of 5.
- Standard deviation: 0.76, indicating some variability in responses regarding the usefulness of physical resources.

Multiple Regression Analysis was conducted to examine the relationship between access to physical resources (independent variable) and entrepreneurial intentions (dependent variable). The regression results show:

- $\beta = 0.45$, $p < 0.01$ (statistically significant), indicating a strong positive relationship between access to university facilities and entrepreneurial intention.

Qualitative Findings: In-depth interviews with students revealed that access to physical resources like incubators significantly impacted their confidence and entrepreneurial abilities. A student mentioned, “The innovation lab gave me hands-on experience, which made me more confident in pursuing my startup idea.”

Implications: These findings highlight the importance of providing physical spaces where students can collaborate, experiment, and receive mentorship. The multiple regression analysis confirms that physical resources are a critical factor in fostering entrepreneurial intentions. Universities should prioritize the expansion of incubators and innovation labs to nurture entrepreneurial students.

4.2 Social and Cultural Environment

Quantitative Findings: From the survey, 82% of students with high entrepreneurial intentions reported benefiting from networking events, peer collaboration, and engagement with industry professionals. Descriptive statistics show that students who participated in university-organized networking events had a higher mean score for entrepreneurial intention (4.2 out of 5). The analysis of the survey data revealed:

- Mean score for social and cultural environment engagement: 4.25 out of 5.
- Standard deviation: 0.62, suggesting less variability and general agreement among respondents regarding the importance of networking and collaboration.

Structural Equation Modeling (SEM) was applied to analyze the relationship between networking/collaboration (independent variables) and entrepreneurial intentions (dependent variable). The SEM model yielded the following results:

- $\beta = 0.39$, $p < 0.05$ (statistically significant), indicating that engagement in networking and collaborative activities has a significant positive effect on entrepreneurial intentions.

Qualitative Findings: Interviews with students revealed that they valued opportunities for networking and collaborative activities. One student shared, “Networking with alumni entrepreneurs and learning from their experiences really motivated me to think about starting my own company.” This qualitative insight supports the SEM results, showing that social and cultural environments significantly impact entrepreneurial intentions.

Implications: The data underscores the importance of social and cultural factors, including networking and collaboration, in shaping students’ entrepreneurial intentions. The SEM analysis suggests that universities should foster environments that facilitate these interactions, such as organizing events where students can network with

entrepreneurs and industry professionals. These activities appear to have a significant impact on students' entrepreneurial intentions.

4.3 Institutional Support

Quantitative Findings: The survey results indicated that 75% of students who had access to institutional support, such as seed funding, entrepreneurial policies, and startup competitions, were more likely to report entrepreneurial intentions. Further analysis showed:

- Mean score for institutional support: 4.1 out of 5.
- Standard deviation: 0.80, indicating that there is some variability in students' perceptions of institutional support.

Reliability Analysis of the institutional support scale yielded a high Cronbach's alpha ($\alpha = 0.87$), indicating strong internal consistency in how students perceived institutional support.

Multiple Regression Analysis revealed that institutional support was a strong predictor of entrepreneurial intention:

- $\beta = 0.56$, $p < 0.01$ (statistically significant), suggesting that institutional support (including funding and policies) is a significant driver of entrepreneurial intentions among students.

Qualitative Findings: Students who reported access to funding and university-driven entrepreneurial programs also shared that these resources were critical in fostering their entrepreneurial aspirations. One student commented, "The university's seed funding helped me turn my idea into a viable startup, which I couldn't have done without that financial support."

Implications: These findings emphasize the critical role that institutional support plays in fostering entrepreneurial intentions. The multiple regression results confirm that policies, funding, and competitions are significant drivers of entrepreneurial ambition. Universities should continue to enhance their institutional support mechanisms to enable students to transition from entrepreneurial intention to actual startup ventures.

4.4 Role of Faculty and Mentorship in Shaping Entrepreneurial Mindsets

Quantitative Findings: The survey data revealed that 80% of students with high entrepreneurial intentions had faculty mentors or participated in mentorship programs. Descriptive statistics show that students with mentorship had a higher mean score for entrepreneurial intention (4.3 out of 5).

Reliability Analysis of the mentorship scale revealed strong internal consistency (Cronbach's $\alpha = 0.88$), confirming the reliability of the data regarding the importance of mentorship in shaping entrepreneurial intentions.

Multiple Regression Analysis indicated that mentorship was a strong predictor of entrepreneurial intention:

- $\beta = 0.51$, $p < 0.01$ (statistically significant), suggesting that having a mentor or faculty member involved in students' entrepreneurial journeys significantly enhances their entrepreneurial intentions.

Qualitative Findings: In the interviews, students spoke highly of the value of faculty mentorship in guiding them through the entrepreneurial process. One participant mentioned, "My professor not only gave me advice but also connected me to industry experts who helped me refine my business plan."

Implications: The data clearly shows that mentorship plays a crucial role in shaping entrepreneurial mindsets. The multiple regression analysis supports the notion that mentorship is an essential factor for developing entrepreneurial intention. Universities should integrate mentorship programs into their entrepreneurship curricula and encourage faculty to take active roles as mentors to support students' entrepreneurial journeys.

The findings of this study, supported by quantitative analysis (using descriptive statistics, reliability analysis, multiple regression, and SEM) and qualitative insights (using thematic analysis), demonstrate the significant impact of university environments on fostering entrepreneurial mindsets and intentions. The statistical data strongly supports the importance of physical resources, networking opportunities, institutional support, and faculty mentorship in shaping students' entrepreneurial aspirations. These findings have important implications for universities seeking to enhance their entrepreneurial ecosystems and ensure that students have the resources, support, and guidance needed to pursue entrepreneurial ventures successfully.

5. Challenges and Barriers in Fostering Entrepreneurial Mindsets in Universities

While universities play a significant role in fostering entrepreneurial mindsets, several challenges and barriers can hinder the effectiveness of their efforts. This section explores these challenges, providing insights from both quantitative and qualitative data, with relevant statistical analysis.

5.1 Lack of Resources and Funding

Quantitative Findings: A common barrier identified by students was the lack of resources and funding to support entrepreneurial ventures. According to the survey data:

- 62% of students reported that inadequate funding and resources were a major obstacle to pursuing their entrepreneurial ideas.
- Mean score for access to resources and funding: 2.8 out of 5, indicating a perception that resources were insufficient.
- Standard deviation: 0.91, suggesting that opinions on funding availability varied significantly among students.

Multiple Regression Analysis revealed that the lack of sufficient resources and funding was negatively correlated with entrepreneurial intention:

- $\beta = -0.33$, $p < 0.05$, indicating a statistically significant negative relationship. This suggests that students who perceive a lack of resources are less likely to pursue entrepreneurial ventures.

Qualitative Findings: Interview responses echoed these concerns. Many students mentioned that while they had viable business ideas, they lacked the financial backing or resources to implement them. One student noted, “The idea was there, but without funding, it just remained a concept. We need more financial support to move forward with our ideas.”

Implications: The statistical results highlight that lack of funding is a significant barrier to entrepreneurial development. Universities should consider increasing their financial support for students, such as offering seed funding, grants, and venture competitions. This will help bridge the gap between ideas and actual startup ventures.

5.2 Institutional Resistance to Change

Quantitative Findings: Many students identified institutional resistance to change as a barrier to fostering entrepreneurship. Some universities have rigid curricula and policies that do not fully accommodate innovative or entrepreneurial initiatives. Survey results revealed that:

- 54% of students felt that institutional structures were too rigid and resistant to adopting new approaches to entrepreneurship.
- Mean score for institutional flexibility: 3.2 out of 5, indicating a moderate level of agreement that institutional resistance is a problem.
- Standard deviation: 0.82, suggesting moderate variability in students’ perceptions of institutional resistance.

Multiple Regression Analysis indicated that institutional resistance had a negative effect on entrepreneurial intention:

- $\beta = -0.28$, $p < 0.05$, showing a significant negative relationship. This suggests that students in universities with more rigid institutional structures are less likely to pursue entrepreneurial ventures.

Qualitative Findings: Interviews revealed that students often found it challenging to implement entrepreneurial projects due to institutional inertia. One participant stated, “The university’s traditional structure doesn’t allow for the flexibility needed for entrepreneurship programs. They’re too focused on conventional education and resistant to change.”

Implications: The findings from the multiple regression analysis suggest that institutional resistance to innovation is a significant barrier. Universities should work on fostering an entrepreneurial culture that embraces flexibility and allows students to experiment with new ideas. This could involve revising curriculum structures and policies to create more space for entrepreneurial initiatives.

5.3 Limited Collaboration Between Academia and Industry

Quantitative Findings: A significant barrier identified in the survey was the limited collaboration between academia and industry. While many students expressed an interest in practical, real-world entrepreneurial experiences, they reported a lack of opportunities for collaboration with industry professionals.

- 68% of students felt that their university did not offer sufficient opportunities for collaboration with industry, which is critical for fostering entrepreneurial thinking and practical experience.
- Mean score for industry collaboration opportunities: 2.9 out of 5, indicating that students perceived limited engagement with industry.
- Standard deviation: 0.85, showing variability in how students rated the importance of such collaborations.

Multiple Regression Analysis showed a significant relationship between industry collaboration and entrepreneurial intention:

- $\beta = 0.42$, $p < 0.01$, indicating a positive relationship. Students who had access to industry collaboration opportunities were more likely to develop entrepreneurial intentions.

Qualitative Findings: Students noted that hands-on experience with businesses and industry experts could significantly enhance their entrepreneurial learning. One participant shared, "We need more internships or projects that link students with actual businesses, so we can see what it takes to succeed in the real world."

Implications: The regression analysis shows that lack of collaboration with industry is a major obstacle to fostering entrepreneurial mindsets. Universities should work to create stronger ties with businesses, offering more opportunities for internships, industry projects, and partnerships that can provide students with real-world experience and mentorship.

5.4 Student and Faculty Engagement Issues

Quantitative Findings: Both student and faculty engagement were identified as barriers in the survey. Many students reported that they did not feel adequately supported or engaged in entrepreneurial activities. Faculty engagement, particularly in terms of providing mentorship, was also viewed as insufficient.

- 61% of students felt that their engagement with faculty on entrepreneurial projects was minimal.
- Mean score for student-faculty engagement: 3.1 out of 5, indicating moderate levels of engagement.
- Standard deviation: 0.78, indicating that some students reported high engagement, while others felt disconnected from faculty.

Multiple Regression Analysis revealed that engagement issues between students and faculty negatively impacted entrepreneurial intention:

- $\beta = -0.25$, $p < 0.05$, suggesting a significant negative relationship between low faculty engagement and students' entrepreneurial intentions.

Qualitative Findings: Students shared that limited interaction with faculty made it difficult for them to get guidance on entrepreneurial ideas. One student mentioned, "I feel like the professors are too focused on theory and don't provide enough real-world advice or feedback on entrepreneurial ideas."

Implications: The findings indicate that faculty engagement plays a critical role in fostering entrepreneurial mindsets. The multiple regression analysis highlights that increased faculty involvement in mentoring students is crucial for developing entrepreneurial intentions. Universities should focus on increasing faculty participation in entrepreneurship programs and encouraging faculty to take active roles in guiding student ventures.

The findings from the quantitative analysis (including descriptive statistics, reliability analysis, multiple regression, and SEM) and qualitative data provide important insights into the challenges universities face in fostering entrepreneurial mindsets. Lack of resources and funding, institutional resistance to change, limited collaboration with industry, and student-faculty engagement issues are significant barriers to the development of entrepreneurial intentions among students. These findings suggest that universities must address these barriers by increasing financial support, creating more flexible and innovative institutional structures, enhancing industry partnerships, and improving student-faculty engagement in entrepreneurial activities. By overcoming these challenges, universities can better foster an environment that supports the development of entrepreneurial mindsets and prepares students to launch successful ventures.

6. Strategies for Enhancing Entrepreneurial Mindsets and Innovation in Universities

Universities play a critical role in shaping students' entrepreneurial mindsets and fostering innovation. As the findings from this research have highlighted, factors such as access to resources, mentorship, and institutional support contribute significantly to entrepreneurial intentions. In light of these findings, the following strategies are proposed to enhance entrepreneurial mindsets and innovation in university environments.

6.1 Curriculum and Pedagogy Adjustments

One of the primary strategies for enhancing entrepreneurial mindsets in universities is through curriculum and pedagogy adjustments. Entrepreneurship education needs to be dynamic, hands-on, and responsive to the evolving demands of the entrepreneurial ecosystem. According to Pittaway and Cope (2007), traditional entrepreneurial education often focuses on theoretical knowledge rather than practical skills, which can leave students unprepared for the challenges of starting and managing a business.

Findings Implications: The research findings show that students who engage in hands-on, experiential learning through programs like business incubators and startup competitions are more likely to develop a strong entrepreneurial mindset. These findings align with the work of Kim (2018), who emphasizes the importance of integrating dynamic capabilities into entrepreneurship programs. By redesigning curricula to include more real-world applications, such as case studies, simulations, and internships, universities can help students bridge the gap between theoretical knowledge and practical entrepreneurial skills.

Furthermore, incorporating cross-disciplinary learning, as suggested by Pacheco et al. (2024), would allow students to view entrepreneurial problems from different perspectives, fostering creativity and innovative problem-solving. Incorporating courses that foster entrepreneurial thinking, resilience, and problem-solving is essential in enhancing students' self-efficacy and their ability to navigate the uncertainties of the entrepreneurial journey.

6.2 Strengthening University-Industry Partnerships

Another key strategy for fostering entrepreneurial mindsets is strengthening university-industry partnerships. Universities need to create more opportunities for students to interact with industry professionals, entrepreneurs, and venture capitalists. Makai and Dőry (2023) emphasize the importance of perceived university support in shaping entrepreneurial intentions. Universities can leverage industry partnerships to provide students with access to mentorship, funding opportunities, and real-world business experience.

Findings Implications: The research findings reveal that students who had exposure to industry professionals, whether through internships, networking events, or collaborative projects, were more likely to pursue entrepreneurial ventures. This is consistent with the observations made by Khorrami, Farhadian, and Abbasi (2018), who found that interaction with industry experts was crucial for developing the necessary competencies for entrepreneurship. Universities can enhance their relationships with local businesses and startups to offer students hands-on experience and opportunities for innovation, thereby fostering entrepreneurial intentions.

Furthermore, O'Connor (2013) highlights the need for universities to align their entrepreneurship education policies with industry needs, ensuring that students are not only prepared with theoretical knowledge but also with the practical insights required to succeed in the real world.

6.3 Fostering a Culture of Risk-Taking and Creativity

Fostering a culture of risk-taking and creativity is another important strategy for enhancing entrepreneurial mindsets. Encouraging students to take calculated risks and view failure as part of the learning process can greatly enhance their entrepreneurial intentions. Ratten (2011) suggests that entrepreneurship programs should embrace a sport-based entrepreneurship model, where students learn to overcome setbacks and remain resilient in the face of challenges. This concept can be extended to university entrepreneurship programs, where students are encouraged to experiment with business ideas and learn from failures.

Findings Implications: The study's findings indicate that students who perceive their university environment as supportive of innovation and risk-taking are more likely to develop entrepreneurial intentions. As Souitaris, Zerbinati, and Al-Laham (2007) argue, programs that emphasize creativity and innovation, along with institutional support, lead to higher levels of entrepreneurial intent among students. The results of this study confirm that universities that

actively foster an environment that encourages risk-taking and creativity will likely see more students pursuing entrepreneurial ventures. Universities can incorporate innovation challenges, hackathons, and entrepreneurial pitch competitions into their programs, offering students opportunities to take risks and develop their ideas in a supportive environment.

6.4 Encouraging Interdisciplinary Collaboration and Knowledge Sharing

Encouraging interdisciplinary collaboration and knowledge sharing is another vital strategy to foster entrepreneurial mindsets. Pacheco et al. (2024) highlight the importance of networks and market orientation for driving sustainable entrepreneurship. By integrating entrepreneurship education across different disciplines, such as business, engineering, the arts, and social sciences, universities can expose students to diverse perspectives and expertise. These interactions help students recognize new opportunities and innovative solutions.

Findings Implications: The study's findings indicate that students who engage in interdisciplinary projects or have access to diverse teams are more likely to develop creative, innovative business solutions. This supports the views of Short et al. (2010), who suggest that entrepreneurship opportunities arise when individuals from different disciplines collaborate and share knowledge. Universities should facilitate cross-departmental collaborations that bring together students from various fields to work on entrepreneurial projects. This could include joint courses, workshops, and collaborative startup accelerators that bring together students with diverse skill sets and viewpoints.

Encouraging a culture of knowledge-sharing within the university can also strengthen students' entrepreneurial orientations by broadening their understanding of different industries, technologies, and markets. This approach will not only foster entrepreneurship but also help develop sustainable business models that consider diverse social, economic, and environmental factors, as discussed by Santos (2012) in relation to social entrepreneurship.

The findings from this study provide critical insights into the factors that influence entrepreneurial mindsets in university environments. By addressing the barriers identified in earlier sections—such as lack of resources, institutional resistance, limited industry collaboration, and engagement issues, universities can implement these strategies to better support entrepreneurial education and innovation.

- Curriculum adjustments should focus on hands-on, experiential learning, providing students with practical skills and fostering an entrepreneurial mindset.
- University-industry partnerships should be strengthened to provide students with exposure to real-world entrepreneurial challenges and mentors.
- Risk-taking and creativity should be nurtured by fostering a culture that supports innovation and views failure as an essential learning experience.
- Interdisciplinary collaboration can be encouraged by creating spaces where students from diverse disciplines work together on entrepreneurial projects, thus enhancing creativity and innovation.

These strategies, when combined with the findings of this study, can help universities build more robust entrepreneurial ecosystems, empowering students to turn ideas into viable businesses.

7. Recommendations

Based on the findings from this study, which highlighted the key factors that influence entrepreneurial intentions and mindsets in university environments, several recommendations are proposed for universities, policymakers, and researchers to enhance the entrepreneurial ecosystem. These recommendations are aimed at improving both student experiences and institutional practices to foster entrepreneurial mindsets and innovation.

7.1 Strategies for Universities to Enhance Entrepreneurial Mindset

Universities should play a leading role in developing an entrepreneurial mindset among their students. The following strategies are recommended to enhance students' entrepreneurial orientations:

1.Curriculum Integration: Universities should integrate entrepreneurial thinking into the broader curriculum. As Urbano and Alvarez (2014) point out, entrepreneurship education should be interdisciplinary, fostering skills that are applicable across various fields of study. This can include incorporating problem-solving, creative thinking, and risk-

taking into courses, even in non-business disciplines. By offering a wide range of entrepreneurial courses and practical projects, students from diverse fields will be able to gain the entrepreneurial skills they need.

2. Experiential Learning: The importance of experiential learning in cultivating entrepreneurial mindsets cannot be overstated. Based on the findings from this study, it is clear that programs such as business incubators, mentorship, and startup competitions should be further expanded. Students should be provided with opportunities to engage in real-world entrepreneurial experiences where they can learn from trial and error, especially given that Zhao, Seibert, and Hills (2005) highlight that self-efficacy is a key mediating factor in the development of entrepreneurial intentions.
3. Encouraging Collaboration with Industry: Universities must build stronger collaborations with industry to offer students practical insights and opportunities. As Walter, Auer, and Ritter (2006) suggest, university spin-offs and partnerships with industry are vital for translating academic knowledge into entrepreneurial practice. By facilitating partnerships with startups, established companies, and venture capitalists, universities can provide students with mentorship and the resources to launch their ventures . (Schimperna, F. et. el. 2021)

4. Promoting Gender Inclusivity: Given the persistent gender gap in entrepreneurship, universities should actively support women entrepreneurship programs. Vossenberg (2013) discusses how universities in developing countries have successfully promoted women entrepreneurship by providing tailored programs and support structures. Universities can apply similar strategies to support women's entrepreneurial development through targeted resources, networks, and mentorship.

7.2 Policy Implications for University Administration

For universities to successfully foster an entrepreneurial mindset, university administrations must adopt policies that support and prioritize entrepreneurship across the institution. Some key policy implications include:

1.Institutional Support for Entrepreneurs: As Urbano and Alvarez (2014) emphasize, institutional dimensions are crucial for fostering entrepreneurial activity. University administrators should develop clear policies that facilitate access to funding, mentorship, and business incubation services. Providing grants, seed funding, and startup competitions would enable students to take entrepreneurial risks and establish viable businesses.
2. Flexible Curriculum and Pedagogical Approaches: University administrations should encourage faculty to adopt flexible and innovative teaching methods (Ratten, V. 2011). A dynamic pedagogy that incorporates real-world entrepreneurial challenges will better equip students to deal with the uncertainty and risk inherent in starting a business (Dimitratos, P, 2004). This approach should be rooted in hands-on learning, business simulations, and problem-based learning, ensuring that students gain practical entrepreneurial skills alongside theoretical knowledge.

3. Encouraging Faculty Engagement in Entrepreneurship Education: University administrators should incentivize faculty members to engage more actively in entrepreneurship education. Faculty can be encouraged to take on mentorship roles, guide students through business challenges, and contribute to curriculum development. Providing professional development opportunities for faculty can also help ensure that they are equipped with the latest knowledge in entrepreneurship education, enabling them to better support students.

4. Creating an Entrepreneurial Culture: The university administration must work towards creating an entrepreneurial culture where students feel encouraged and supported in pursuing entrepreneurial careers. This could include integrating entrepreneurship into the institution's mission statement, promoting entrepreneurial values, and ensuring that faculty, staff, and students understand the importance of entrepreneurial thinking in a rapidly changing global economy.

7.3 Suggestions for Future Research

While this study has provided valuable insights into the role of university environments in fostering entrepreneurial mindsets, several avenues for future research can help deepen our understanding and improve strategies for entrepreneurial education. These include:

1.Longitudinal Studies: Future research should explore longitudinal studies to track how students' entrepreneurial intentions and mindsets evolve over time. This type of research would allow for a better understanding of the long-term impacts of university-based entrepreneurship education and the effectiveness of various entrepreneurial programs.

2.Exploring Entrepreneurial Ecosystems: Research could focus on how entrepreneurial ecosystems within universities (i.e., the integration of education, industry, funding, and networks) influence the success of student entrepreneurs. This approach could help identify specific components of the university ecosystem that are most beneficial in fostering innovation and entrepreneurial ventures.

3.Global Comparative Studies: Given the international nature of entrepreneurial education, comparative studies between universities in different countries and cultures could provide insights into how cultural and institutional differences shape entrepreneurial intentions. Vossenberg (2013)'s work on women entrepreneurship in developing countries could serve as a model for investigating how diverse cultural contexts influence entrepreneurial behavior in universities.

4.Gendered Perspectives on Entrepreneurship Education: Given the ongoing gender gap in entrepreneurship, more research is needed to explore the impact of gendered entrepreneurship education. Future studies could investigate how specific policies, mentorship programs, and networks tailored to women entrepreneurs in university settings help bridge the gender gap in entrepreneurship, as highlighted by Vossenberg (2013).

5.Technology and Entrepreneurship: Finally, with the growing importance of technology and digital entrepreneurship, future research could focus on how universities can adapt their entrepreneurial programs to better address the opportunities and challenges presented by the digital economy. Research could examine how universities are integrating entrepreneurial orientation and technology-based innovation in their programs, drawing from the work of Pittaway & Cope (2007) and Kim (2018), who both explore the intersection of innovation and entrepreneurship education.

Fostering entrepreneurial mindsets and innovation within university environments requires a comprehensive approach that integrates curriculum adjustments, strong industry partnerships, a supportive institutional framework, and a culture of collaboration and risk-taking. The recommendations presented here are grounded in both the findings of this study and the broader academic literature. By implementing these strategies, universities can significantly enhance their role in nurturing the next generation of entrepreneurs, equipped with the skills and mindset necessary to navigate the challenges of the modern business world.

8. Conclusion

This research explored the role of university environments in shaping entrepreneurial mindsets and fostering innovation, revealing that factors such as access to physical resources, social and cultural environments, institutional support, and faculty mentorship significantly influence students' entrepreneurial intentions. Findings indicated that students who had access to incubators, networking opportunities, funding, and faculty mentorship were more likely to develop entrepreneurial behaviors. The study emphasizes the importance of universities integrating experiential learning into curricula, strengthening industry partnerships, fostering a culture of risk-taking and creativity, and ensuring faculty engagement in entrepreneurial activities. However, barriers such as lack of resources, institutional resistance, limited collaboration with industry, and student-faculty engagement issues must be addressed. Future research should explore longitudinal studies, cross-cultural comparisons, and gender inclusivity in entrepreneurship to provide further insights. The findings underscore the need for universities to create supportive, flexible environments that nurture entrepreneurial mindsets, equipping students with the tools to succeed in today's competitive, innovation-driven economy.

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