Journal of Design and Textiles (JDT)
Volume 3 Issue 2, Fall 2024
ISSN$_{(P)}$: 2959-0868 ISSN$_{(E)}$: 2959-0876
Homepage: https://journals.umt.edu.pk/index.php/jdt/index

Article QR

Title:	**Student Entrepreneurship: The Way Forward for Textile Design Students in Pakistan**
Author (s):	Atifa Usmani[1], Syed Farjood Ailya Rizvi[2], and Momina Arshad Malik[1]
Affiliation (s):	[1]Government Graduate College for Women, Lahore, Pakistan [2]University of the Punjab, Lahore, Pakistan.
DOI:	https://doi.org/10.32350/jdt.32.06
History:	Received: June 12, 2024, Revised: August 15, 2024, Accepted: October 10, 2024, Published: November 15, 2024
Citation:	A. Usmani, S. F. A. Rizvi, and M. A. Malik, "Student entrepreneurship: The way forward for textile design students in Pakistan," *J. Des. Text.*, vol. 3, no. 2, pp. 106–123, December. 2024, doi: https://doi.org/10.32350/jdt.32.06
Copyright:	© The Authors
Licensing:	This article is open access and is distributed under the terms of Creative Commons Attribution 4.0 International License
Conflict of Interest:	Author(s) declared no conflict of interest

A publication of
School of Design and Textiles
University of Management and Technology, Lahore, Pakistan

Student Entrepreneurship - The Way Forward for Textile Design Students in Pakistan

Atifa Usmani[1], Syed Farjood Ailya Rizvi[2*], and Momina Mansoor[1]

[1]Department of Textile Design, Government Graduate College for Women, Lahore, Pakistan
[2]College of Art & Design, Department of Graphic Design, University of the Punjab, Lahore, Pakistan.

ABSTRACT This paper aims to highlight student entrepreneurship as an emerging phenomenon which stimulates economic growth by shaping young students into entrepreneurs. The need to realise important avenues and challenges associated with the practice of student entrepreneurship is explored as an explicit research question in this study. The paper specifically assesses the scope of student entrepreneurship in the discipline of textile design, stressing the need to bridge the gap between academia and industry. The government and its higher education policies urge entrepreneurship to be taught only as a theoretical subject in higher education institutes (HEIs). However, to enable students to make innovative uses of resources and to explore and pursue career or business opportunities as entrepreneurs is a requisite lacking in such programmes. Hence, the current study explores if the subject of 'textile design' can provide lucrative practice-based learning opportunities to students, who can become entrepreneurs by creating profitable business organizations during their student years. For this purpose, fresh graduates with a degree in textile design were selected as sample. The findings indicated that students are highly motivated to engage in business pursuits. Furthermore, the study also identified barriers hampering their entrepreneurial engagement. The changing dynamics of academia and industry relationships in this regard were also examined. Qualitative research design was used and data was collected via interviews and reflective practice method. Moreover, the existing entrepreneurship literature was reviewed to contextualize textile design education vis-à-vis its perceived and proposed roles for student entrepreneurship. The study concludes that the opportunities to develop entrepreneurial skills during student years should be considered crucial in order to establish a community capable of functioning independently and successfully in a knowledge-based economy.

*Corresponding Author: farjood.cad@pu.edu.pk

INDEX TERMS academia-industry relationship, knowledge-based economy, student entrepreneurship, textile design

I. INTRODUCTION

This study contributes to enhance the limited knowledge available regarding academic and/or student entrepreneurship, textile design industry, practice-based learning, and academia-industry relationship in Pakistan. Understandably, enhanced interactions between institutes offering higher education and the private marketplace have been a subject of voluminous research over the past few years, which highlighted the emergence of academic and student entrepreneurship through the medium of university spinoffs [1]. This research discusses the scope and significance of academic entrepreneurship for textile design students with a focus on the much needed and crucial link between academia and industry. The authors utilised the experiences with their textile design students, which provided the impetus for conducting this study. A number of students were found to be career-driven. Such students wanted to carve a name for themselves as independent designers or even create a brand in the long-run. They were found craving for a portal like entrepreneurship education and practice-based learning which could help them find the best career opportunities. A review of existing literature was also conducted to contextualise the subject at hand. There is a dearth of studies regarding textile design education [2], yet there is plentiful interdisciplinary entrepreneurship literature available [3]. The need for student entrepreneurship by bridging the gap between academia and industry, students' commitment to and involvement in practice-based learning, and the barriers hampering such involvements were discussed. The final segment of this article presents the findings, underscores areas for future research, and provides suggestions to incorporate student entrepreneurship for textile design students in universities or higher education institutes (HEIs). Although this research is primarily embedded in the localised context of students belonging to a single institution, the findings and propositions are generalisable and applicable to similar creative disciplines, despite diverse institutional contexts.

II. ACADEMIC ENTREPRENEURSHIP - SELECTED THEORETICAL CONCERNS

In recent years, the relationship between academia and industry has altered significantly. There is a closer link between science and technology [4] with a focus on enhancing the university's commercialisation potential by creating university spinoff companies [5]. The universities are facing pressures to go beyond their role of providing traditional education and to exercise their potential for innovative commercial applications [6]. They are expected to obtain external funding and resources which pave the way to entrepreneurial activities for researchers and to support their research projects. The universities employ entrepreneurial activities so that they may exploit scientific and technological advancements through technology transfer engagements [7]. Multiple collaborative networks between educational institutions and industry are thus funded by prestigious state-governed organisations in the world [8]. These are considered to be "knowledge transfer partnerships" [9]. All such processes of attaching 'technological development with economic growth' [10] are most commonly bracketed under the concept of 'academic entrepreneurship' [11].

As opposed to the traditional view of academic entrepreneurship carried out by faculty researchers and their spinoff companies [12], [13], universities also aim to generate a suitable environment for student entrepreneurship [14]. This perspective calls for a broader discernment of the concept of academic entrepreneurship. Recent literature has, in fact, attempted vigorously to expand this construct outside the conventional, patent-based view of universities' spinoffs [15]–[17]. Student entrepreneurship, therefore, can be regarded as a subset of academic entrepreneurship, not specifically involving scientific research. Quotable examples of this phenomenon include the business ventures of the founders of Apple, Microsoft, Dell, Facebook, and Snapchat. These founders, as students, combined new knowledge and business opportunities within their academic environment [15].

Defined largely as the integration of educational research and business, student entrepreneurship may take any of the following forms: educational cooperation, business counselling, the organisation of joint research programmes and the creation of enterprises by researchers and, above all, by university students and graduates [3].

A. STUDENT ENTREPRENEURSHIP - NEW ROLE FOR UNIVERSITIES

Modern day universities, besides propagating education and research, have to participate in various activities including innovation, productivity, social change, and industrial competitiveness [18]. Based on these roles, the term 'entrepreneurial university' has emerged in educational and public discourse [6]. Academic entrepreneurship relies mainly on the creativity and inventiveness of student communities by making the best use of available resources vis-à-vis the extent to which their outcomes can be applied in business-related activities [19].

Student entrepreneurship has surfaced as an important subject in recent years [20]. Educators and policymakers consider student entrepreneurship as an important medium of professional growth for students, whereby they get the chance to combine theory and practice in a creative, pragmatic, and rewarding manner [21]. In advanced countries such as the US, the level of student entrepreneurial activity has risen significantly [22]. This is due to the reason that colleges and universities have not only recognised the beneficial role of student entrepreneurship in the society but that they also promote students' enterprising behaviour [23]. Universities in the US receive sizeable donor funding to open institutes and centres to promote student entrepreneurship [24]. Thousands of educational institutes offer entrepreneurship-related courses in an attempt to increase its knowledge and understanding and now it is a mandatory course in HEC's undergraduate policy 2023. HEDP has also introduced ISF program in Pakistan [25].

The prospects of engaging in new businesses suffuse the students with enterprise and entrepreneurial skills [26], [27]. Although, the number of educational plans and initiatives regarding university-based entrepreneurship are growing all over the world, there remains a need to recognise the significance of the depth and diversity of entrepreneurial education [28]. Specialized entrepreneurship education, in combination with entrepreneurial intent [29] and a diversified experience, would maximise the chances of venture creation. This may lead to future wealth creation for the respective entrepreneur with the effect of increasing their personal net worth [28].

B. STUDENT ENTREPRENEURSHIP - A CRUCIAL ECONOMIC FORCE

Entrepreneurship is deemed to be one of the most significant economic forces in modern-day societies. Entrepreneurial ventures have a crucial role to play in preserving the economic vitality of any nation. Such ventures help to recognise opportunity, generate new business ideas, create economic activities, and add to numerous employment prospects [30], [31]. The future economic wellbeing of the world is critically dependant on entrepreneurial activities. Today's students are potential entrepreneurs of tomorrow [32]. Economic growth via significant job creation is hugely dependent upon the role of business start-ups [33]. Previous studies suggest that academic entrepreneurs create more innovative business ventures and make their businesses grow by investing resources and creating new business opportunities [33], [34]. Students' exposure to real-world entrepreneurs is more likely to impart to them tacit business knowledge [35]. Studies also suggest that innovative entrepreneurs promote the economic growth of any country, whether they come from formal educational institutes or informal ones [36].

University spin-off companies have made a huge contribution towards economic development of their respective regions. They create jobs for students interested in business ventures as well as knowledge-intensive jobs for researchers. Besides, they also diversify the local economy, magnetize talent and investment, and gratify customer needs [37].

III. METHOD

This study utilises a qualitative research design. Semi-structured interviews and reflective practice method were used for data collection. The methods followed a sequential pattern. The current study is limited to the textile design students of one institute, namely University of Home Economics. As a subject, textile design relies heavily on the creativity and innovation brought to the fore by brilliant artistic and inventive minds. Textile design students from the department of Art and Design of the above university have a long-standing history of working in the industry as professional designers and entrepreneurs, hence fulfilling the requisite for the sample criteria. Universities' alumni are considered as a significant source for producing future entrepreneurs in creative and dynamic disciplines [33]. Apart from students, an expert holding years of experience within the industry and the

convener of Academia-Industry Linkage Committee at Lahore Chambers of Commerce were also interviewed. A preliminary survey was conducted by the researcher to identify suitable candidates who could formulate the desired sample.

A total of eight students were selected by employing the purposive sampling technique. Purposive sampling was used to identify industrious and career-oriented former students. All of them had already graduated from the university. Three of them were fresh graduates, while others were attached with the textile industry as employees, as entrepreneurs, or in both capacities. Semi-structured interviews conducted with the case study participants in real-life context [38] were the main tool of data collection. The interviews provided rich description about the subjects in their naturalistic setting [39]. All the participants were asked to use 'reflection on action' method to answer the questions. Reflective practice method [40] enables the researchers to incorporate personal experiences [41] and allows reflection on those experiences to enhance learning [42].

Content analysis was applied to interview data and initial codes were formed from questions These codes were revised and modified in relation to the responses present within the interview transcripts. Then, thin description [43] was obtained thereof. With the codes thus formulated, common meaningful patterns were identified and categorised as themes upon which the thematic analysis was performed. Thematic analysis enables the researchers to decipher shared or collective meanings and experiences [44].

A. INTERVIEW QUESTIONS

The following questions were posed to the participants:

1. How important is student entrepreneurship as a subject for textile design students?
2. Should textile design students be given an opportunity to engage in practice-based learning in higher classes?
3. What difference would student entrepreneurship make to the careers of students?
4. What are the scope and prospects of entrepreneurship for textile design students?

5. Is it beneficial for students to link academia with industry?

III. FINDINGS

The findings were categorised in three major themes based on the codes derived from the data generated through the interviews. The responses of all respondents were submitted in the form of 'thin description' stemming from pre-investigative empirical preferences and also from the analytic requirements of the study. Thin description is as much a part of qualitative research design as it is integral to research as a whole [43]. The generated codes and themes are discussed below.

All the data was assigned codes by systematically organising and labelling it into meaningful groups. Codes can be descriptive, interpretive, or pattern-based, so that they resonate with the data and the purpose of research. All codes were formulated by identifying patterns and by grouping them together. Codes were then categorised in three broader themes.

TABLE I
CODES AND THEMES

Codes	Themes
Entrepreneurial mindset Practice-based learning Academia-Industry Linkage	Students' approach towards entrepreneurship
Lack of viable business idea/plan Lack of support Lack of funds Difficult to balance student and professional life Early opportunity to be employed	Barriers hampering the pursuit of entrepreneurship
A professionalism inducing initiative Prospects for earning higher income Greater work independence Opportunity to pursue ones' dreams Necessity rather than an option (especially in post-Covid-19 scenario)	Driving factors supporting student entrepreneurship

A. STUDENTS' APPROACH TOWARDS ENTREPRENEURSHIP

The data suggested that the textile design students are consumed mostly by their studies and on-campus academic activities. They do not really have an entrepreneurial mindset. The reasons are diverse and many. They are not really trained to think like future entrepreneurs, either by their families or by the institutions they study at. Being female students, they are brought up in a protected environment, where supporting the family is mostly the job of parents or the guardian. Therefore, it doesn't come naturally to them to develop an entrepreneurial mindset. Secondly, practice-based learning is not an active part of regular practical-based subjects, in this case the subject of textile design. Although, some students did opt for internship programs with different institutes but the nature of internships varied. Most of the students are involved only in developing their academic projects and products and linkage with the industry is not supported by their curricula or institutes. Although newer BS programs teach entrepreneurship at BS level, but learning a subject theoretically is still different from actually working with the industry. If academia is actively linked with the industry, students would be engaged in learning through actual practice while staying within the ambit of the institution and the industry simultaneously, thus affording them a richer experience. They can learn through doing mandatory internships, field visits, market surveys, apprenticeships, meeting with industry professionals on a regular basis to stay abreast of the changing trends, by finding funding and mentorship initiatives, and by getting chances at selling their own proposals and ideas to market professionals, resulting in propelling economic activity at the national level.

B. BARRIERS HAMPERING THE PURSUIT OF ENTREPRENEURSHIP

This theme discusses the problems faced by the students who believe that student entrepreneurship is definitively the way forward for a better economic future for the individuals and the country alike, but there are multiple pitfalls. Firstly, all students shared the sentiment that their minds are not really trained to come up with viable business plans. Even if they do, the fear of failure takes precedence within their minds before they could embark on their independent professional journey. As students, they were mostly concerned with meeting their deadlines to accomplish all academic feats in the given time. Hence, they never really had the opportunity to develop and harness ideas about becoming entrepreneurs using the skills

they learned during their extensive practical-based learning modules. The lack of funds is another huge factor hampering the students' career pursuit. Some students who tried to think on these lines with little success believed that if their institutes and parents both support them in their professional pursuits and place faith in their abilities by financing them for a beginning, things could change radically in their favour. Similarly, some students were of the view that they lacked the enthusiasm to become student entrepreneur. This is because it is already difficult to fulfil all academic commitments needed to qualify for the degree, therefore, occupying oneself with side businesses would be too daunting, too challenging a task to accomplish. It would need good skills to balance the student life with the life of an entrepreneur.

The expert from the industry had his reservations regarding the lack of concern for the basic code of conduct and professional mannerism on behalf of the students. He reflected on his experiences with student internees and elucidated his thoughts about the matter. He suggested that the major barrier for the majority of students is their own lack of discipline, professionalism, and their haste to make money in a short time. He did agree that institutes need to play a role in facilitating students to get in touch with the industry and help them for their start-up businesses. Moreover, state organisations must also play a role in this regard if they want the country to be put on a self-sustaining economic growth model. If more students were to get a chance to work with professionals, it would alter the mindset of parents, students, teachers, and educational institutes at large. Furthermore, this young workforce would be able to do wonders for the economy if they realise that the barriers were easy to break.

C. DRIVING FACTORS SUPPORTING STUDENT ENTREPRENEURSHIP

Students were interviewed about the notion of student entrepreneurship, actualised with the help of academia-industry linkage, as the guiding principle for modern-day education system. This could potentially help them to become career-oriented professionals and also assist them to navigate between career choices for a better professional life. It was found that the students showed a promising approach towards this notion of student entrepreneurship. They suggested that incubation and skill development programmes could go a long way in guiding their entrepreneurship career paths. They were positively thrilled with the idea of

getting employed at an early age and stage in life, provided they were granted such opportunities. They believed that it is a better case scenario for any student if they manage and harness their resources, including time, energy, skills, and also their intellectual resources, by working efficiently during student life and becoming an entrepreneur. Student entrepreneurship would afford them greater intellectual and financial freedom. It would help them develop a professional outlook on practical aspects of life. Such an outlook would benefit them later on when they may actually work with the industry or even independently.

It was found that those students who had already dabbled with such initiatives during their student days were the ones whose families had suffered financially during COVID-19 outbreak. In response, they developed their professional portfolios as textile designers and established their very small-scale businesses. They were already on path to taking on the world headlong as they believed that not being an entrepreneur and keep waiting for the right job is not an option in the post-COVID-19 world. They stated that entrepreneurship allows them greater freedom to work upon their preferred ideas and themes and the market is quite receptive to newer suggestions. These students with start-up businesses not only support themselves but also their families and are proving to be a valuable addition to the country's workforce.

IV. DISCUSSION

The study discusses the pressures [6] faced by HEIs to introduce business initiatives [18] and foster the right environment for student entrepreneurship [14]. Students believe that HEIs need to expand their role as facilitators for academia-industry linkage outside the conventional, patent-based view of universities' spinoffs [15]–[17]. Subjects like textile design can be taught to add depth and diversity [28] and to introduce budding talent and potential [19] in the textile industry of Pakistan in the form of student entrepreneurs. Data suggests that in a country like Pakistan, students coming from diverse socioeconomic backgrounds depend on the intervention and facilitation by HEIs to take entrepreneurial initiatives and develop start-up businesses, so they may play a pivotal role in preserving the economic vitality of the nation. Such ventures help to recognise opportunity, generate new business ideas, create economic activities, and add to employment prospects [30], [31]. Students who already run small-scale businesses believe that they, as

entrepreneurs, help to promote the economic growth of their country [36] and also improve life for themselves.

More research on the role of HEIs to promote student entrepreneurship, the role of industry in promoting young talent in the field of textile design, and the role of government in facilitating enterprising students should be carried out to highlight the significance of this topic. Universities should adopt an entrepreneurial approach by providing opportunities for students to collaborate with industries and professionals. Such efforts should include internships, mentorship programmes, and workshops that focus on developing business ideas. This would not only help students to apply their skills but also enhance their understanding of the market. By fostering an environment of entrepreneurship, universities can empower students to become self-sufficient and contribute positively to the economy.

The barriers to student entrepreneurship are significant and complex. Many students feel unprepared to develop solid business plans and the fear of failure often holds them back from taking risks. They are also overwhelmed with academic responsibilities leaving with little room to explore to explore entrepreneurial ideas. Financial support is also crucial; without it, many students feel they cannot start their own business. Moreover, some students struggle with discipline and professionalism, which can hinder their success as entrepreneurs. The expert's insights highlighted the importance of educational institutions and external organisations in providing support and opportunities. If students have more chances to engage with industry professionals, they can gain valuable experience and confidence. This collaboration could change how all stakeholders view student entrepreneurship and help build a stronger economy.

A. CONCLUSION

HEIs play an extremely important role in helping their students to pursue a successful professional life. The tasks for universities are manifold, such as offering high-quality entrepreneurship courses, nurturing a culture of innovation and inventiveness, bridging the gap between academia and industry, holding events like start-up get-togethers, arranging business plan contests, linking students with professionals from the industry, cultivating a highly professional attitude among students, and fostering an entrepreneurial atmosphere. All this is needed so as to sensitize students towards understanding the importance of entrepreneurship, to equip them

with the needed tools and skills, and to support them in their pursuit of entrepreneurial activities. HEIs should be aware of this role so that they may fulfil the expectations in this regard. To conclude, student entrepreneurship is an extremely important and fascinating field that merits a lot of attention of scholars, academicians, practitioners, and policymakers so that new and successful ventures can be created and fostered. It is extremely crucial to tap into this raw potential and create student entrepreneurs so as to establish a community capable of functioning independently and successfully in a knowledge-based self-sustaining economy.

CONFLICT OF INTEREST

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

DATA AVALIABILITY STATEMENT

The data associated with this study will be provided by the corresponding author upon request.

FUNDING DETAILS

No funding has been received for this research.

REFERENCES

[1] M. M. Mars and C. Rios-Aguilar, "Academic entrepreneurship (re) defined: Significance and implications for the scholarship of higher education," *High. Educ.*, vol. 59, pp. 441–460, 2010, doi: https://doi.org/10.1007/s10734-009-9258-1.

[2] H. Britt, "Practice what you teach? Examining the significance and complexities of textile designer educator creative practice," *Art Design Commun. High. Educ.*, vol. 12, no. 1, pp. 49–64, Sep. 2013, doi: https://doi.org/10.1386/adch.12.1.49_1.

[3] M. Rembiasz, "Student entrepreneurship–research on development," *MATEC Web Conf.*, vol. 121, Art. no. 12015, Aug. 2017, doi: https://doi.org/10.1051/matecconf/201712112015.

[4] A. Schütz, "The stranger: An essay in social psychology," *Am. J. Sociol.*, vol. 49, no. 6, pp. 499–507, May 1944, doi: https://doi.org/10.1086/219472.

[5] N. Fowler, *Walking the plank of the entrepreneurial University: The little spin-out that could?* Ph.D. dissertation, Dep. Eng. Sci. Indust. Eng. Manag., Uppsala Univ., Uppsala, 2017.

[6] H. Etzkowitz, A. Webster, C. Gebhardt, and B. R. C. Terra, "The future of the university and the university of the future: Evolution of ivory tower to entrepreneurial paradigm," *Res. Pol.*, vol. 29, no. 2, pp. 313–330, Feb. 2000, doi: https://doi.org/10.1016/S0048-7333(99)00069-4.

[7] D. C. Mowery and S. Shane, "Introduction to the special issue on university entrepreneurship and technology transfer," *Manag. Sci.*, vol. 48, no. 1, pp. 5–9, Jan. 2002, doi: https://doi.org/10.1287/mnsc.48.1.0.14277.

[8] F. Hansson and M. Mønsted, "Changing the peer review or changing the peers—Recent development in assessment of large research collaborations," *High. Educ. Pol.*, vol. 25, pp. 361–379, Aug. 2012, doi: https://doi.org/10.1057/hep.2012.17.

[9] C. Hall and R. Earley, "Divide, switch, blend. Exploring two hats for industry entrepreneurship and academic practice-based textile design research," *Des. J.*, vol. 22, no. 1, pp. 19–35, May 2019, doi: https://doi.org/10.1080/14606925.2019.1595848.

[10] R. Fini, K. Fu, M. T. Mathisen, E. Rasmussen, and M. Wright, "Institutional determinants of university spin-off quantity and quality: A longitudinal, multilevel, cross-country study," *Small Bus. Econ.*, vol. 48, pp. 361–391, 2017, doi: https://doi.org/10.1007/s11187-016-9779-9.

[11] F. T. Rothaermel, S. D. Agung, and L. Jiang, "University entrepreneurship: A taxonomy of the literature," *Indust. Corp. Change*, vol. 16, no. 4, pp. 691–791, July 2007, doi: https://doi.org/10.1093/icc/dtm023.

[12] C. S. Hayter, "Constraining entrepreneurial development: A knowledge-based view of social networks among academic entrepreneurs," *Res. Pol.*, vol. 45, no. 2, pp. 475–490, Mar. 2016, doi: https://doi.org/10.1016/j.respol.2015.11.003.

[13] S. Shane, "Encouraging university entrepreneurship? The effect of the Bayh-Dole Act on university patenting in the United States," *J. Bus.*

Ventur., vol. 19, no. 1, pp. 127–151, Jan, 2004, doi: https://doi.org/10.1016/S0883-9026(02)00114-3.

[14] J. M. Marchand and A. H. Hermens, "Student entrepreneurship: A research agenda," *Int. J. Organiz. Innov.*, vol. 8, no. 2, pp. 266 – 281, 2015.

[15] A. C. Alves, B. Fischer, P. R. Schaeffer, and S. Queiroz, "Determinants of student entrepreneurship: An assessment on higher education institutions in Brazil," *Innov. Manag. Rev.*, vol. 16, no. 2, pp. 96–117, Jan. 2019, doi: https://doi.org/10.1108/INMR-02-2018-0002.

[16] M. Abreu and V. Grinevich, "The nature of academic entrepreneurship in the UK: Widening the focus on entrepreneurial activities," *Res. Pol.*, vol. 42, no. 2, pp. 408–422, Mar. 2013, doi: https://doi.org/10.1016/j.respol.2012.10.005.

[17] M. Matt and V. Schaeffer, "Building entrepreneurial ecosystems conducive to student entrepreneurship: New challenges for universities," *J. Innov. Econom. Manag.*, no. 1, pp. 9–32, 2018, doi: https://doi.org/10.3917/jie.025.0009.

[18] D. S. Siegel and M. Wright, "Academic entrepreneurship: Time for a rethink?" *Brit. J. Manag.*, vol. 26, no. 4, pp. 582–595, Oct. 2015, doi: https://doi.org/10.1111/1467-8551.12116.

[19] P. Drucker and J. Maciariello, *Innovation and Entrepreneurship*. Routledge, 2014.

[20] A. Gupta and V. Gupta, "Just a lemonade stand: An introduction to student entrepreneurship," *New Eng. J. Entrepren.*, vol. 20, no. 1, pp. 34–45, Mar. 2017, doi: https://doi.org/10.1108/NEJE-20-01-2017-B003.

[21] A. Ridder and P. Van Der Sijde, "Launching students into enterprise: Experiences with technology as a launching platform," *Int. J. Know. Manag. Stud.*, vol. 1, no. 1–2, pp. 121–132, Jan. 2006, doi: https://doi.org/10.1504/IJKMS.2006.008849.

[22] N. Seymour, *College Student Entrepreneurs: Motivations and Challenges*. Nicole, 2001.

[23] K. H. Vesper and W. B. Gartner, *Compendium of Entrepreneur Programs*. University of Southern California, 2001.

[24] A. Krass, "Donor gives $5.4 million for student entrepreneurs," *Bus. J. Phoenix*, Oct. 2004.

[25] Government of Pakistan. "Undergraduate Education Policy." HEC. https://www.hec.gov.pk/english/services/students/UEP/Documents/UGE-Policy.pdf (accessed June 1, 2024).

[26] J. A. Katz, "The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999," *J. Bus. Ventur.*, vol. 18, no. 2, pp. 283–300, Mar. 2003, doi: https://doi.org/10.1016/S0883-9026(02)00098-8.

[27] K. H. Vesper and W. B. Gartner, "Measuring progress in entrepreneurship education," *J. Bus. Ventur.*, vol. 12, no. 5, pp. 403–421, Sep. 1997, doi: https://doi.org/10.1016/S0883-9026(97)00009-8.

[28] D. K. Dutta, J. Li, and M. Merenda, "Fostering entrepreneurship: Impact of specialization and diversity in education," *Int. Entrep. Manag. J.*, vol. 7, pp. 163–179, 2011, doi: https://doi.org/10.1007/s11365-010-0151-2.

[29] C. L. Shook, R. L. Priem, and J. E. McGee, "Venture creation and the enterprising individual: A review and synthesis," *J. Manage.*, vol. 29, no. 3, pp. 379–399, June 2003, doi: https://doi.org/10.1016/S0149-2063(03)00016-3.

[30] A. D. Daniel, "Fostering an entrepreneurial mindset by using a design thinking approach in entrepreneurship education," *Ind. High. Educ.*, vol. 30, no. 3, pp. 215–223, June 2016, doi: https://doi.org/10.1177/0950422216653195.

[31] D. F. Kuratko, "The emergence of entrepreneurship education: Development, trends, and challenges," *Entrep. Theory Pract.*, vol. 29, no. 5, pp. 577–597, Feb. 2005, doi: https://doi.org/10.1111/j.1540-6520.2005.00099.x.

[32] P. Sieger, U. Fueglistaller, and T. Zellweger, "Student Entrepreneurship 2016: Insights from 50 Countries," IMU Management, 2016. [Online]. Available: https://boris.unibe.ch/89857/1/GUESSS_2016_INT_Report_final.pdf

[33] C. Lüthje and N. Franke, "Fostering entrepreneurship through university education and training: Lessons from Massachusetts Institute

of Technology," in *Eur. Acad. Manage. 2nd Annu. Conf. Innov. Res. Manage.*, Stockholm, May 2002, pp. 9–11.

[34] P. B. Robinson and E. A. Sexton, "The effect of education and experience on self-employment success," *J. Bus. Ventur.*, vol. 9, no. 2, pp. 141–156, 1994, doi: https://doi.org/10.1016/0883-9026(94)90006-X

[35] B. Johannisson, D. Halvarsson, and E. Lövstål, "Stimulating and fostering entrepreneurship through university training–learning within an organizing context," in *Conf. Int. Entrep. Educ. Training*, Monterey Bay, CA, USA, June 1997, pp. 25–27.

[36] S. Aparicio, D. Urbano, and D. Audretsch, "Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence," *Technol. Forecast. Soc. Change*, vol. 102, pp. 45–61, Jan. 2016, doi: https://doi.org/10.1016/j.techfore.2015.04.006.

[37] T. Bailetti, "Fostering student entrepreneurship and university spinoff companies," *Technol. Innov. Manage. Rev.*, vol. 1, no. 1, pp. 7–12, 2011.

[38] C. Robson and K. McCartan, *Real World Research*. New York, USA: John Wiley & Sons, 2016.

[39] B. Gillham, *Developing a Questionnaire*. London, UK: Wellington House, 2000.

[40] E. Igoe, "In Textasis: Matrixial Narratives of Textile Design," Ph.D. dissertation, Royal College Art, Univ. of Portsmoouth., United Kingdom, 2013. [Online]. Available: https://www.proquest.com/openview/94a9b547a7de354e0cd270ab8b1f2295/1?pq-origsite=gscholar&cbl=51922

[41] D. J. Clandinin and F. M. Connelly, "Personal experience methods," in *Handbook of Qualitative Research*, N. K. Denzin and Y. S. Lincoln, Eds. Sage Pub., 1994, pp. 413–427.

[42] T. Russell, "Can reflective practice be taught?" *Reflective Pract.*, vol. 6, no. 2, pp. 199–204, 2005, doi: https://doi.org/10.1080/14623940500105833.

[43] W. H. Brekhus, J. F. Galliher, and J. F. Gubrium, “The need for thin description,” *Qual. Inq.*, vol. 11, no. 6, pp. 861–879, Dec. 2005, doi: https://doi.org/10.1177/1077800405280663.

[44] V. Braun and V. Clarke, “Thematic analysis,” in *APA Handbook of Research Methods in Psychology, Vol. 2: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological*, H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, and K. J. Sher, Eds. Am. Psychol. Assoc., 2012, pp. 57–71.