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Entrepreneurial behavior of undergraduate students: A study of state agriculture university

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Abstract

Entrepreneurship has emerged as an essential driver of economic growth and innovation in India, particularly among the youth population. This study explores the entrepreneurial behaviour of undergraduate students enrolled at VCSG Uttarakhand University of Horticulture and Forestry, Ranichauri, Uttarakhand, India. Key entrepreneurial traits examined include decision-making ability, risk-taking behaviour, innovativeness, market orientation, leadership qualities, management and planning orientation, and information-seeking behaviour. Primary data were collected through a structured questionnaire administered via Google Forms to undergraduate students of the College of Forestry and College of Hill Agriculture. A total of 44 valid responses were obtained and analyzed descriptively.

Keywords: Entrepreneurial behaviour, undergraduate students, risk-taking, innovativeness, leadership, decision-making, forestry education, Uttarakhand

Introduction

Entrepreneurship has long been recognized as a critical driver of economic growth, employment generation, and societal transformation across the world. Schumpeter (1934) ^[19] was among the first to articulate the pivotal role of the entrepreneur as an innovator who disrupts existing market equilibrium through the introduction of new products, methods, and organizational forms. In subsequent decades, entrepreneurship research evolved substantially, with scholars like Drucker (1985) ^[9] emphasizing that entrepreneurship is not merely a personality trait but a purposeful discipline rooted in systematic innovation and opportunity recognition. Today, governments worldwide regard entrepreneurship as a primary policy instrument for accelerating economic development, reducing unemployment, and fostering competitive advantage in global markets. Agripreneurship is an employment strategy that can lead to economic self-sufficiency of rural people. Agripreneurship development through training is a key element for the promotion of Micro, Small and Medium Enterprises (MSMEs), particularly, the first-generation agripreneurs (Ahmed *et al.* 2011) ^[11]. State Agriculture Universities (SAUs) in India serve as the principal institutional pillars for agricultural higher education, research, and extension. Established under the

Radhakrishnan Commission recommendations of 1955 and modeled on the American Land Grant University pattern, SAUs have been mandated to integrate teaching, research, and extension functions for the holistic development of the agricultural sector (ICAR, 2019). Undergraduate programs at these universities — encompassing disciplines such as agriculture, horticulture, agribusiness management, agricultural engineering, and food technology — enroll students predominantly from rural and agrarian backgrounds. Bairwa *et al.* (2014) ^[4] noted that such students, by virtue of their direct exposure to agricultural challenges and rural ecosystems, possess a unique contextual advantage for agri-entrepreneurship. The cultivation of entrepreneurial behavior within this student population is therefore not only educationally significant but also carries direct implications for agricultural transformation and rural development.

Entrepreneurial behavior is a multi-dimensional construct that encompasses cognitive, motivational, and action-oriented components. McClelland (1961) ^[14] identified the need for achievement (n-Ach) as the foundational psychological driver of entrepreneurial behavior, arguing that individuals with high achievement motivation are more inclined to pursue innovative and risky ventures.⁹ Subsequent researchers have expanded this framework to

include risk-taking propensity (Brockhaus, 1980) ^[7], innovativeness (Lumpkin and Dess, 1996) ^[13], self-efficacy (Bandura, 1986) ^[5], and decision-making ability as core dimensions of entrepreneurial behavior. In agricultural education research, Swanson and Redmond (2006) ^[21] demonstrated that entrepreneurial behavior among agriculture students is significantly influenced by prior farm experience, family entrepreneurial background, and the quality of entrepreneurship education received.

Recognizing the imperative of entrepreneurship education, the Government of India has initiated several policy and programmatic interventions aimed at fostering an entrepreneurial culture among agricultural graduates. The Agri-Clinics and Agri-Business Centres (ACABC) scheme, launched in 2002, was among the first structured attempts to channelize trained agriculture graduates into self-employment ventures (NABARD, 2018). The RKVY-REALTAAR (Rashtriya Krishi Vikas Yojana — Remunerative Approaches for Agriculture and Allied sector Rejuvenation) program has further institutionalized agri-startup support through dedicated Agri-Business Incubators (R-ABIs) at agriculture universities (Department of Agriculture and Farmers Welfare, 2020) ^[8]. The National Education Policy 2020 ^[18] has additionally called for the mainstreaming of entrepreneurship education across all disciplines of higher education, including agriculture, emphasizing experiential learning, problem-solving, and innovation (Ministry of Education, GoI, 2020) ^[16].

Despite the growing policy emphasis on agri-entrepreneurship and the expanding body of research on student entrepreneurial behavior, systematic empirical investigations focused specifically on the entrepreneurial behavior of undergraduate students in State Agriculture Universities remain limited. While studies such as those by Mishra *et al.* (2019) ^[17] and Singh and Bhowmick (2015) ^[20] have explored entrepreneurial intentions among Indian agricultural students, a comprehensive assessment of the multidimensional entrepreneurial behavior encompassing innovativeness, risk-taking, achievement motivation, leadership orientation, and decision-making within the specific institutional context of SAUs is notably absent from the literature. This gap is particularly significant given that SAU students constitute a strategically important population for India's agri-entrepreneurship ecosystem.

Materials and Methods

Study Area

The study was conducted at VCSG Uttarakhand University of Horticulture and Forestry, Ranichauri, Tehri Garhwal, Uttarakhand, India (altitude approximately 2200 m above sea level). The campus houses two constituent colleges: the College of Forestry and the College of Hill Agriculture, which together enroll a substantial number of undergraduate students in natural resource-based disciplines.

Selection of Respondents

The target population comprised full-time undergraduate students (aged 17–21 years) enrolled in B.Sc. programmes (Forestry & Agriculture). A digitally administered questionnaire was distributed via WhatsApp groups and email IDs. Participants were given one week to complete their responses, with a single reminder sent to encourage

participation.

Sampling Procedure

Simple random sampling method was adopted, given its practicality in reaching a digitally active student population. The initial target was 200 responses; however, a total of 44 fully completed and valid responses were received through Google Forms. Incomplete or duplicate entries were excluded. Respondent demographic information was collected to ensure reasonable representativeness of the sample.

Data Collection Instrument

A structured questionnaire was developed to assess seven entrepreneurial dimensions: (i) information-seeking behaviour, (ii) risk-taking ability, (iii) decision-making ability, (iv) innovativeness, (v) leadership qualities, (vi) management and planning orientation, and (vii) market orientation.

Results and Discussion

Profile of Respondents

Table 1 reveals the socio-demographic characteristics of the 44 respondents. Female students representation was 77.3% of the sample, while male students were 22.7%. A large proportion 84.1% belonged to the Forestry discipline, with the remaining 15.9% from Agriculture. The age distribution was evenly split, with 50% of respondents in the 17–20 age bracket and 50% aged 21 years or above.

Table 1: Socio-demographic characteristics of respondents (n = 44)

S. No.	Variable	Category	Frequency	Percentage (%)
1.	Gender	Female	34	77.3
		Male	10	22.7
2.	Course	Forestry	37	84.1
		Agriculture	7	15.9
3.	Age	17–20 years	22	50.0
		21+ years	22	50.0

Information-Seeking Behaviour

The mean familiarity of respondents with entrepreneurship was 3.33 on a five-point scale (range = 3.0), indicating moderate awareness that falls between 'Average' and 'High'. Table 2 summarizes mean scores and ranges for various information sources.

Table 2: Mean Scores for Information-Seeking Behaviour Variables

Variable	Mean	Range
Familiarity with entrepreneurship (1–5)	3.33	3.0
Familiarity with key concepts	0.67	1.0
Director of Extension as information source	2.10	2.0
Newspaper as information source	2.33	2.0
Radio as information source	2.07	2.0
Officers / Scientists as information source	2.12	2.0
Training programmes as information source	2.29	2.0

Risk-Taking Ability

Table 3 stated the standard deviations for risk-taking ability indicators. A high standard deviation for 'Interest in learning about entrepreneurship' (1.055) indicates diverse

motivational levels within the sample. Conversely, low standard deviation for 'risk-taking when success chances are high' (0.415) suggests general consensus that calculated risk is acceptable. These findings align with Brockhaus (1980) [7], who characterized entrepreneurs as moderate and calibrated risk-takers.

Table 3: Standard Deviations for Risk-Taking Ability Indicators

Survey Question	Std. Deviation
Interest in learning about entrepreneurship (1–5 scale)	1.055
Risk avoidance by adopting multiple enterprises	0.485
Risk-taking when success chances are high	0.415
Preferring high risk for high profit over safer small profit	0.497
Willingness to adopt new practices via radio/newspaper	0.468
Financial success tied to risk-taking	0.526
Participation in discussions on new practices	0.617
Initiating discussions on new practices	0.680
Regarded as a good information source	0.601
Assigning enterprise work to family members	0.680
Feeling that ideas are valued in meetings	0.604
Willingness to try new practices	0.552
Willingness to borrow money for enterprise	0.623
Choosing kind of inputs for enterprise	0.692
Attending meetings or training programmes	0.811
Reinvesting money earned through business	0.587
Hiring workers for the enterprise	0.740
Adjusting size of enterprise as needed	0.656
Switching to a new enterprise	0.712

Notably, 64.3% of respondents stated they generally take great risks, yet 77.3% are uncomfortable taking risks even with a high probability of success, indicating a divergence between self-assessed risk propensity and actual risk behaviour. Furthermore, 59.5% prefer safer, smaller profits, consistent with the risk aversion observed in student populations by Lüthje and Franke.

Leadership Abilities

Leadership qualities were found to be moderately but inconsistently developed. Only 23.3% of students consistently participate in group discussions, while 62.8% do so occasionally. Similarly, 20.9% always initiate discussions on new practices, and 65.1% report that their ideas are 'sometimes' valued in meetings. This pattern is consistent with Kroon, who found leadership to be a relatively stronger entrepreneurial attribute compared to opportunity obsession and proactive behaviour.

A positive correlation was observed between interest in entrepreneurship and participation in discussions on new practices. The scatter plot analysis confirmed that students with higher entrepreneurial interest were more likely to engage in peer learning activities, suggesting that interest is a meaningful precursor to participatory behaviour.

Decision-Making Ability

Decision-making capacity was cautious and incremental. A majority (67.4%) tries new practices only occasionally, and only 7% always reinvest business earnings. Additionally, 16.3% are consistently willing to borrow capital for ventures. Importantly, 51.2% have never attended a training programme or meeting, limiting their exposure to structured

decision-support frameworks. These observations align with Kirzner, who noted that entrepreneurial decision-making under uncertainty depends heavily on accumulated knowledge and market awareness.

Innovativeness

Table 4 presents respondent views on innovation-related statements using a five-point scale (SA = Strongly Agree, A = Agree, UD = Undecided, D = Disagree, SD = Strongly Disagree).

Table 4: Innovativeness Responses (n = 44)

Statement	SA (%)	A (%)	UD (%)	D (%)	SD (%)
No harm to accept new technology as soon as possible	2.3	6.8	34.1	34.1	20.5
New technology should not be used unless its potential is well known	4.7	7.0	18.6	32.6	37.2
Innovative technology/ideas place enterprise at frontline	7.1	2.4	28.6	31.0	31.0
Innovative technology contributes to improving standard of living	2.3	7.0	27.9	32.2	25.6
Well-designed programmes fulfill user needs and solve problems	4.7	9.3	32.6	30.2	23.3

The data reveal cautious innovation attitudes: the majority of respondents were either undecided or disagreed with statements affirming the benefits of early technology adoption. This conservatism may reflect the practical constraints of rural and forest-based environments, where adoption of unproven technologies carries substantial risk. Ward (2004) similarly noted that limited guidance and funding constrain students' capacity to translate innovative ideas into action.

Management and Market Orientation

Regarding planning orientation, 79.5% disagreed that periodic performance review is important, while 62.8% agreed that prior product launch decisions are necessary. Only 16.3% agreed that timely input assessment is important, with 83.7% disagreeing. These findings reflect limited formal planning literacy among the sample.

Market orientation was more nuanced: 57% agreed that market news is useful, and 81.4% agreed that grading produce helps achieve better prices. However, only 14% believe that enterprises should be designed around market demand, suggesting that market-driven thinking is not yet deeply embedded. Kohli and Jaworski's emphasis on market intelligence as a core entrepreneurial competency underscores the need for market orientation training in these disciplines.

Barriers to Entrepreneurship

Respondents identified a diverse range of challenges to venture creation. The most frequently cited barriers were financial constraints (lack of seed capital, funding, and investment), limited market knowledge and access to distribution channels, insufficient legal and regulatory knowledge, challenges in team-building, and difficulties in customer acquisition and business scaling. Additional qualitative responses highlighted the absence of trusted mentors, lack of physical infrastructure, and personal risk aversion. These findings resonate broadly with the literature,

particularly Nabi, Parimaladevi and Husain, who emphasized that institutional and social support systems are critical to converting entrepreneurial intent into action.

Summary and Conclusions

This study examined the entrepreneurial behaviour of undergraduate students at VCSG UUHF, Ranichauri, across seven characteristics: information-seeking, risk-taking, leadership, decision-making, innovativeness, management/planning orientation, and market orientation. Major findings are: 70.7% of the respondents are willing to try new practices, particularly when introduced through media channels, reflecting an openness to change. 64.3% of the respondents report as risk-takers, but 77.3% are uncomfortable in taking risks even with a high probability of failure. Only 23.3% of the respondents consistently engage in group discussions. As far as decision making is concerned, reinvestment, and hiring decisions are predominantly occasional rather than systematic, reflecting financial conservatism. In innovation hesitancy, students demonstrate caution around adopting new technology, reflecting practical uncertainty in field contexts. Informal information dependency of students heavily on friends and social media, while formal channels like training programmes and extension officers remain significantly underutilized. Financial constraints, market inexperience, and absence of mentorship are the most critical perceived obstacles to new venture creation.

The findings reveal that the majority of students display basic entrepreneurial attributes particularly willingness to adopt new practices (70.7%) and risk-taking (64.3%), significant gaps persist in proactive decision-making, consistent leadership engagement, and access to formal entrepreneurial information channels. Students predominantly rely on informal information sources such as peers and social media, with 44.2% never having accessed training programmes. Financial constraints, limited market knowledge, and fear of failure are identified as primary barriers to venture creation. The study recommends targeted entrepreneurship education, mentorship programmes, and institutional support mechanisms to bridge existing capability gaps and foster a vibrant entrepreneurial culture among forestry and agriculture students.

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