The Green Catalyst: A Systematic Exploration on Entrepreneurial Sparks Inciting Sustainable

Ms. Neha Verma*, Dr. Monika Aggarwal**

*Research Scholar, University Institute of Applied Management Sciences (UIAMS), Panjab University, Chandigarh

Email: nehaverma.research@gmail.com

**Professor, University Institute of Applied Management Sciences (UIAMS), Panjab University, Chandigarh

Abstract

Purpose:
In tackling global issues, entrepreneurship and sustainable innovation are at the forefront, attracting the attention of researchers and policymakers alike. This study offers an insightful examination of the relationship between sustainability and entrepreneurial activities through a systematic literature review and bibliometric analysis.

Design/methodology/approach:
The study examines 201 academic publications (out of 1440) pertinent to the role of sustainable innovation in entrepreneurship, contributing to a sustainable future. It synthesizes findings to extract trends and key themes from the Scopus database up to May 05, 2024.

Findings:
Research interest in the field has increased substantially over the last decade. The United Kingdom has published the maximum number of papers. Existing studies focus on the relevance of sustainable innovation for enhancing environmental performance, generating stakeholder value, managerial commitment, the significance of green technology, and synergies among environmental, economic, and social sustainability in innovation. Future research should explore areas like sustainable entrepreneurship, innovation in supply chain management, environmental performance, and small and medium enterprises.

Originality:
This review rigorously explores the nexus of entrepreneurship and sustainable innovation. It demonstrates current results while highlighting areas that remain underexplored. The study provides a framework for researchers to present fresh perspectives and novel ways that build upon existing literature.

Keywords:
Entrepreneurship, Sustainability, Sustainable innovation, Systematic literature review

Smt. Jawala Devi College of Education, Cordia Institutes, Sanghol, Punjab

1. Introduction

In an era where sustainability is no longer a choice but a necessity, sustainable innovation and entrepreneurship emerge as transformative forces (El-Kassar & Singh, 2019). These forces reflect the interconnectedness between organizational success (Khusnah&Soewarno, 2024) and environmental stewardship (Boons &Lüdeke-Freund, 2013). Incorporating sustainable practices into innovation and entrepreneurial endeavors has attracted increased attention as organizations seek to lessen their environmental impact while remaining competitive (Hong et al., 2024; Yin & Zhao, 2024).

This paper aims to provide a comprehensive synthesis of the body of research in sustainable innovation and entrepreneurship, identifying gaps, assessing prevailing trends, and outlining future paths. This synthesis is crucial for scholars, policymakers, and practitioners, supporting informed decision- making and strategic planning in pursuing sustainable business practices.

2. Systematic Literature Review Methodology

2.1 Identification of Keywords and Selection Criteria

The systematic literature review (SLR) methodology was followed to thoroughly understand prior research and highlight pertinent findings (Moustaghfir, 2008). A total of 1440 documents published in Scopus over the past decade (from 2011 to May 05, 2024) were downloaded using the keywords "sustainab* innovation," "esg innovation," "green innovation," and "entrepreneurship" or "business*." Of these, 201 documents were

selected for further review based on the inclusion/exclusion criteria.

Criteria:

Panel A: Inclusions

- Keywords in the title, abstract, or keywords section

- Articles published in English

- Focus on sustainable innovation and entrepreneurship

Panel B: Exclusions

- Conference papers, book chapters, review articles

- Full-text unavailable

- Articles in languages other than English

2.2 PRISMA Chart

(Placeholder for PRISMA Chart Image) Adapted from Moher et al., 2009.

3. SLR Findings

3.1 Year-wise Publications

The field of "entrepreneurship and sustainable innovation" has experienced a substantial increase in academic publications from 2011 to May 2024. Over 58% of the 201 studies were conducted between 2021 and May 2024. 2023 saw the highest number of publications, with 40 articles, followed by 2022 with 34.

(Table 2: Year-wise Publications) **Source(s): Author's representation**

3.2 Journal Outlets

The review identified papers published in 100 different journals. The Journal of Cleaner Production featured the most, with 26 papers, followed by Business Strategy and the Environment with 20 papers. This distribution suggests that research on sustainable

innovation and entrepreneurship is spread across various journals, without centralization in a particular publication.

(Table 3: Productive Journals) **Source(s): Author's representation**

3.3 Country-wise Publications

Countries with the most publications in the domain include the United Kingdom (31 articles), the United States (21 articles), China (20 articles), and Spain (19 articles). Contributions from Germany, Indonesia, Italy, and the Netherlands also highlight global interest in sustainable innovation.

(Table 4: Country-wise Publications) **Source(s): Author's representation**

3.4 Thematic Demarcation

Theme 1: Relevance of Green Innovation for Stakeholder Value and Environmental Performance
Research highlights the importance of green innovation in enhancing environmental performance and generating stakeholder value (Tang et al., 2018; Cheng et al., 2014). CSR, green certifications, and strategic experimentation are also critical for increasing business performance (Padilla-Lozano &Collazzo, 2022; Baldassarre et al., 2020).

Theme 2: Role of HR Practices and Managerial Engagement
Management commitment and HR strategies significantly impact sustainable innovation initiatives (El-Kassar & Singh, 2019). Sustainable venture capitalists also play a crucial role in green startups (Bocken, 2015).

Theme 3: Coordination of Regulations, Innovation, and Market Dynamics
Green inclusive leadership and market dynamics foster sustainable innovation, with regulatory frameworks like EMS 14001:2015 contributing to improved business performance (Khan & Johl, 2019; Bhutto et al., 2021).

Theme 4: Green Technology and Innovation
Green innovation practices, supported by big data technologies and strong managerial practices, enhance environmental performance. These efforts help companies stay competitive and environmentally responsible (Brehmer et al., 2018).

Theme 5: Synergies between Environmental, Social, and Economic Sustainability
Sustainable practices, green innovation, and employee commitment create a positive impact on organizational performance. Research and development investments further drive green technology management (Sharma et al., 2021; Khan & Johl, 2019).

---

4. Bibliometric Analysis

Table 5: Keyword Analysis
Of 1166 keywords used in the reviewed documents, 62 meet the threshold for co-occurrence. The top-used keywords include "Green Innovation," "Innovation," "Sustainability," and "Sustainable Development."

keywords	cluster No.	Total link strength	Occurrences
innovation	1	248	56
sustainability	1	215	52
environmental economics	1	90	15
entrepreneur	1	52	11

sustainable entrepreneurship	1	40	11
business development	1	55	9
corporate strategy	1	35	7
sustainability innovation	1	27	7
corporate social responsibility	1	16	6
open innovation	1	21	5
stakeholder	1	33	5
strategic approach	1	33	5
corporate sustainability	1	17	4
europe	1	11	4
stakeholder engagement	1	20	4
sustainable development	2	200	47
commerce	2	68	16
climate change	2	24	7
competition	2	41	7
environmental performance	2	25	7
environmental policy	2	24	6
competitive advantage	2	25	5
supply chains	2	29	5
empirical analysis	2	24	4
innovation management	2	9	4
Sales	2	12	4
supply chain management	2	21	4
sustainable innovation	3	83	35
business model innovation	3	45	10
circular economy	3	41	6
sustainable business	3	36	6
Business	3	26	5
business models	3	32	5
Ecosystems	3	9	5
Smes	3	11	5
sustainable business model	3	32	5

|			
Manufacturing	3	32	4
dynamic capabilities	4	15	6
literature review	4	32	6
research and development	4	26	6
Digitalization	4	18	5
Finance	4	25	5
Management	4	15	5
systematic literature review	4	32	5
bibliometric analysis	4	21	4
Marketing	4	22	4
green innovation	5	139	60
green entrepreneurship	5	20	7
financial performance	5	26	6
firm performance	5	35	6
industrial performance	5	44	6
Performance	5	14	6
intellectual capital	5	7	4
Sme	5	13	4
green innovations	6	59	13
green economy	6	58	11
environmental management	6	63	10
Investments	6	27	6
eco-innovation	6	32	5
Economics	6	21	5
business performance	6	11	4
China	7	37	9
technological development	7	31	5
green transformational leadership	7	9	4
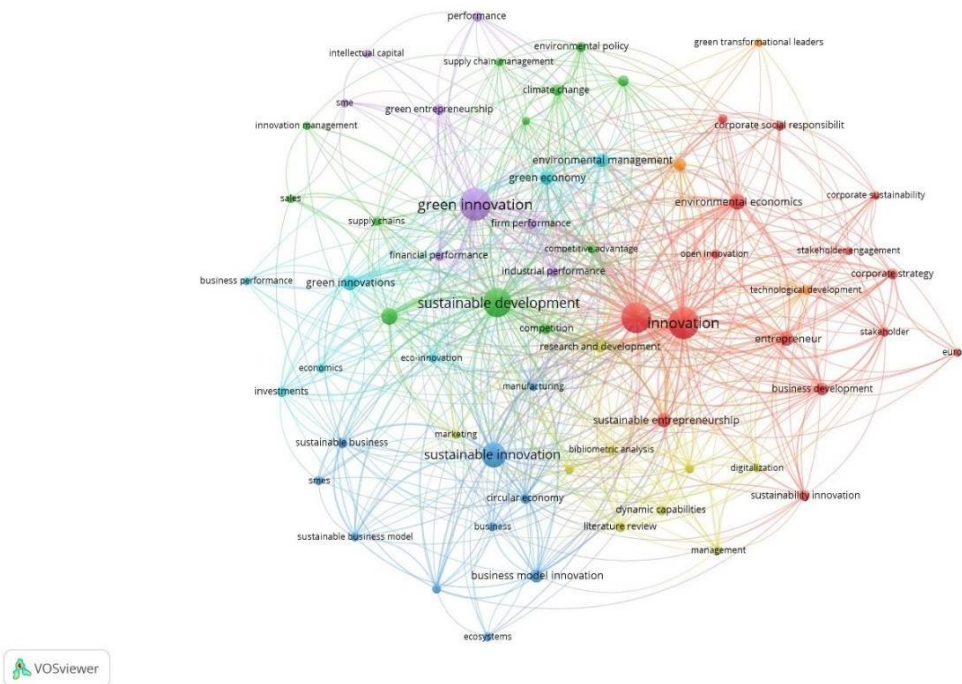
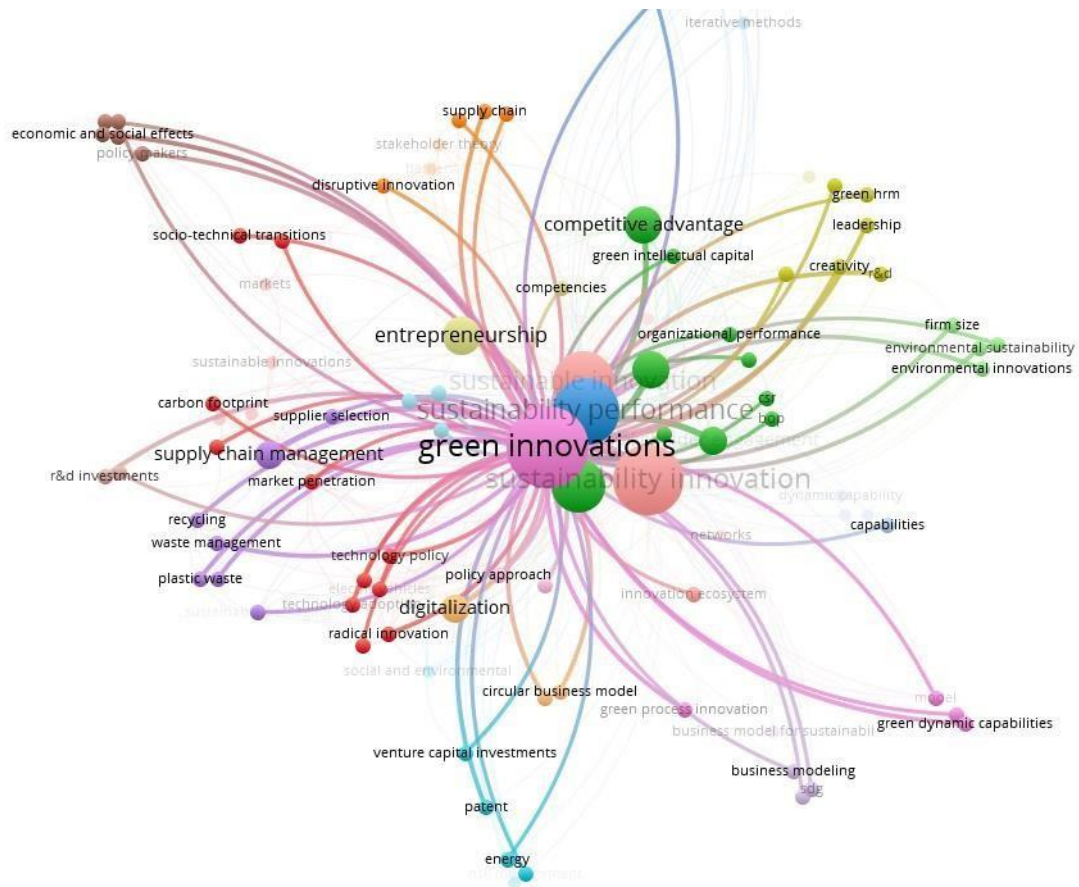Figure 2: Co-occurrence analysis
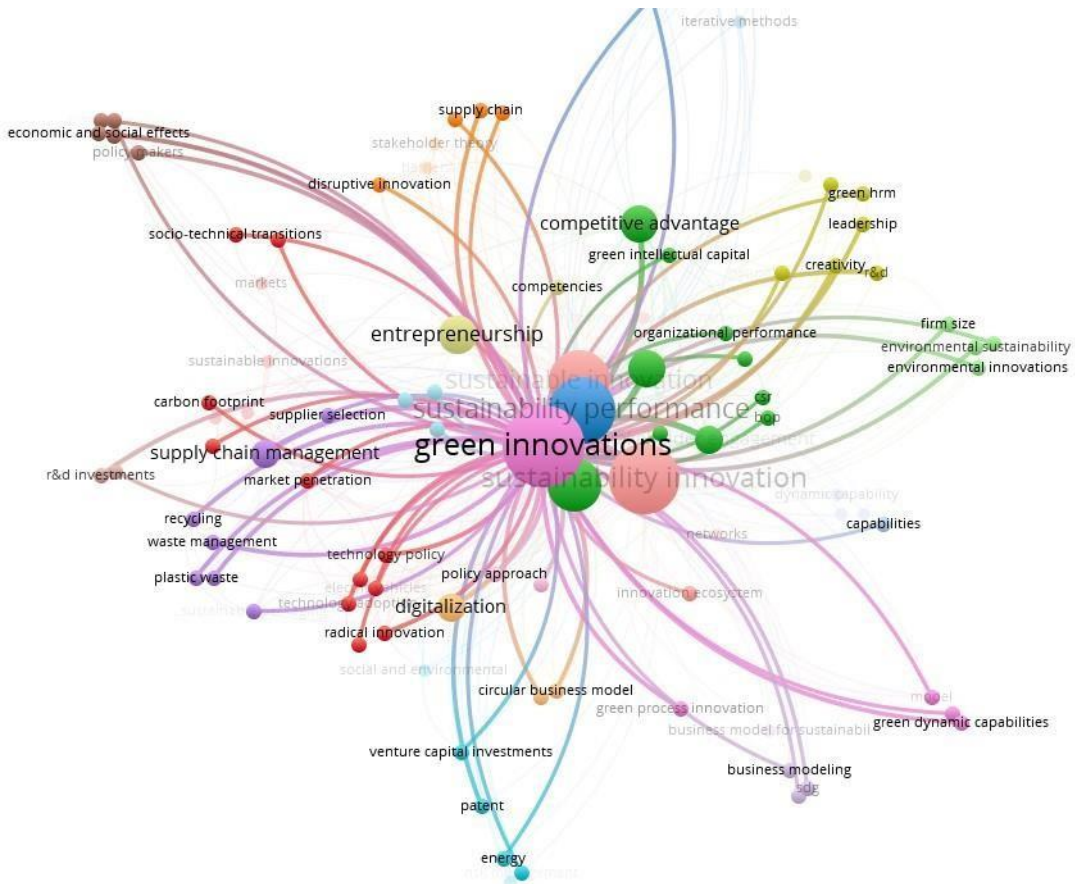
Figure 2: Co-occurrence analysis

Figure 2: Co-occurrence analysis

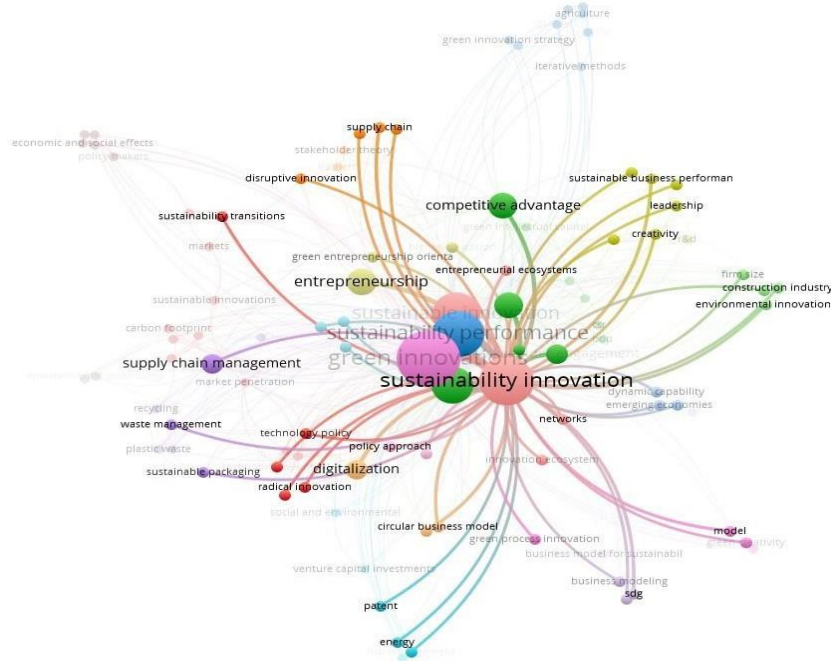Figure 5: Co-occurrence analysis concerning "Sustainable Innovation".

Figure 5: Co-occurrence analysis concerning "Sustainable Innovation".

5. Conclusion and Implications

This study offers a systematic literature review and bibliometric analysis of sustainable innovation and entrepreneurship. It identifies key research themes and gaps in the field, such as the relevance of green innovation for generating stakeholder value and environmental performance. Future research should focus on less-explored areas like sustainable entrepreneurship, supply chain management, and small enterprises.

The study has practical implications for academicians, researchers, managers, and regulatory agencies. For academicians, it provides a comprehensive overview of sustainable innovation in entrepreneurship. For managers, the findings suggest that managerial commitment to sustainable innovation can improve organizational performance. For regulatory bodies, the study emphasizes the need to ensure sustainability practices through incentives and regulations.

References

(List of References Cited in the Report)

- Abdelfattah, F., Salah, M., Dahleez, K., Darwazeh, R., & Al Halbusi, H. (2024). The future of competitive advantage in Oman: Integrating green product innovation, AI, and intellectual capital in business strategies. *International Journal of Innovation Studies*, 8(2), 154–171.

- Abubakar, A., Khalifa, M. M., Elbasset, F. H. A., &Alkharusi, B. (2022). Strategic Integration of Green Innovation, Green Behavior, and Information Systems for Sustainable Business Performance & Competitiveness. *International Journal of Management and Sustainability*, 11(1), 31-45.

Smt. Jawala Devi College of Education, Cordia Institutes, Sanghol, Punjab

- Agustia, D. (2023). Does green innovation play an important role in the effect board gender diversity has on firm performance? *Intangible Capital*, 19(2), 146–164.

- Baldassarre, B., Konietzko, J., Brown, P., Calabretta, G., Bocken, N., Karpen, I. O., &Hultink, E. J. (2020). Addressing the design-implementation gap of sustainable business models by prototyping: A tool for planning and executing small-scale pilots. *Journal of Cleaner Production*, 255.

- Bocken, N. M. P. (2015). Sustainable venture capital - Catalyst for sustainable start-up success? *Journal of Cleaner Production*, 108, 647–658.

- Cheng, C. C. J., Yang, C.-L., & Sheu, C. (2014). The link between eco-innovation and business performance: A Taiwanese industry context. *Journal of Cleaner Production*, 64, 81–90.

- El-Kassar, A.-N., & Singh, S. K. (2019). Green innovation and organizational performance: The influence of big data and the moderating role of management commitment and HR practices. *Technological Forecasting and Social Change*, 144, 483–498.

- Khan, P. A., & Johl, S. K. (2019). Nexus of Comprehensive Green Innovation, Environmental Management System-14001-2015 and Firm Performance. *Cogent Business and Management*, 6(1).

- Khusnah, H., &Soewarno, N. (2024). Human capital readiness and global market orientation to business performance: The mediation role of green innovation. *Contaduria y Administracion*, 69(4), 1–19.

- Padilla-Lozano, C. P., &Collazzo, P. (2022). Corporate social responsibility, green innovation and competitiveness – causality in manufacturing. *Competitiveness Review*, 32(7), 21–39.

Challenges Faced by First-Generation College Students: An Ethnographic Study in Rural Punjab

Dr.Gurjant Singh*, Dr. Paramjeet Kaur Mangat**, Dr. Harjinder Singh**, Ms. Amita Sharma**, Ms. Taruna Narang**

*Principal, Cordia Composite College, Sanghol,

**Assistant Professor in Education, Smt. Jawala Devi College of Education, Sanghol

Abstract: This ethnographic study explores the challenges faced by first-generation college students (FGCS) in rural Punjab, India. The study aims to provide a detailed understanding of the financial, academic, cultural, and social barriers that significantly impact the educational journeys of these students. Data were collected through semi-structured interviews with 30 FGCS from public colleges in rural Punjab, utilizing thematic analysis to identify key themes and insights. The findings reveal that financial constraints are the most pervasive challenge, compounded by inadequate academic preparation and limited access to educational resources. Cultural and familial expectations further complicate the pursuit of higher education, particularly for female students. The study also identifies significant gaps in institutional support, including a lack of faculty engagement and mentorship. Participants suggested several interventions, such as increased financial aid, access to academic tutoring, and culturally relevant curricula, to improve their educational experiences. The research underscores the need for targeted, culturally sensitive support mechanisms that address the specific needs of FGCS in rural contexts. These insights have broader implications for policymakers and educators aiming to enhance educational equity and promote social mobility among marginalized groups.

Keywords: First-generation college students, rural education, ethnographic study, educational barriers, Punjab, socio-economic challenges.

Introduction

Higher education is often seen as a critical pathway to economic and social mobility, yet first-generation college students (FGCS)—those whose parents did not attend college—face distinct challenges that hinder their educational success. These challenges are amplified in rural settings, where socio-economic disadvantages, limited access to resources, and cultural barriers further complicate the pursuit of higher education (Bui, 2002). In rural Punjab, India, the educational aspirations and achievements of FGCS are often undermined by a confluence of factors, including poverty, inadequate schooling, and a lack of academic support (Stough-Hunter & Lekies, 2023).

Understanding these challenges is essential for creating targeted interventions that can improve educational outcomes for this marginalized group.

FGCS often come from low-income families where financial constraints are a significant barrier to accessing and persisting in higher education. For instance, many students from rural areas in Punjab rely on agricultural income, which is unpredictable and often insufficient to cover the costs associated with higher education (Jones, Eveland, & Besong, 2022). This financial instability can lead to increased stress and the need for students to work while studying, which detracts from their academic focus and performance. Additionally, FGCS are less likely to have the academic preparation needed for college success due to

the lower quality of primary and secondary education in rural areas (McCulloh, 2020). According to data from the National Center for Education Statistics, only 24% of FGCS in rural areas enroll in postsecondary education, compared to 42% of their non-FGCS peers, highlighting the significant disparity in educational access (Evans et al., 2020).

The cultural context of rural Punjab also plays a critical role in shaping the experiences of FGCS. Traditional gender roles and expectations can limit the educational aspirations of female students, while societal norms often prioritize immediate economic contribution over long-term educational investment (Morton et al., 2018). In many cases, students face pressure to conform to family and community expectations, which may not align with the pursuit of higher education. This cultural dissonance can result in a lack of familial support, as parents who did not attend college may not fully understand the value of higher education or how to navigate the academic system (McCulloh, 2020). Consequently, FGCS in rural Punjab often find themselves navigating the complexities of higher education with minimal guidance and support, which significantly impacts their retention and success.

Parental support—or the lack thereof—is a critical factor in the academic journey of FGCS. Research indicates that FGCS with strong parental and community support systems are more likely to persist in their educational pursuits (McCulloh, 2020). However, in rural Punjab, many parents of FGCS lack the social and cultural capital to provide this support effectively. They are often unfamiliar with the academic environment and may unintentionally contribute to the stress and alienation their children feel in college. The absence of role models and mentors who have successfully navigated higher education further exacerbates these challenges (Stough-Hunter & Lekies, 2023). A study by McCulloh (2020) found that FGCS in rural areas reported feeling isolated and overwhelmed, with many expressing doubts about their ability to succeed without adequate parental and institutional support.

In addition to financial and cultural barriers, FGCS in rural areas face significant academic challenges. A study by Jones, Eveland, and Besong (2022) identified academic preparation as one of the primary obstacles to FGCS success in rural settings. Many rural schools in Punjab lack the necessary resources, such as qualified teachers and advanced coursework, to adequately prepare students for the rigors of higher education. This educational disparity is compounded by limited access to technology and internet connectivity, which are increasingly essential for academic success in the digital age (Morton et al., 2018). The lack of academic preparedness not only affects students' performance but also their confidence and motivation, leading to higher dropout rates among FGCS compared to their peers (Evans et al., 2020).

Furthermore, the geographic isolation of rural areas can limit the accessibility of higher education institutions. In Punjab, many FGCS must travel long distances to attend college, which can be both time-consuming and costly. This geographic barrier often results in students opting for less rigorous or less prestigious institutions simply because they are more accessible (Howley, Chavis, & Kester, 2013). Moreover, rural students frequently lack access to college counseling and preparatory resources that are more readily available in urban settings, further diminishing their prospects for success (Stough-Hunter & Lekies, 2023). For instance, a study conducted by Howley, Chavis, and Kester (2013) revealed that only half of the rural FGCS they interviewed had access to college preparatory programs, compared to nearly 80% of their urban counterparts.

Addressing the challenges faced by FGCS in rural Punjab requires a multi-faceted approach that includes policy interventions, community engagement, and enhanced institutional support. Educational institutions need to develop targeted retention programs that address the specific needs of FGCS, such as financial aid, academic tutoring, and mentoring programs that connect students with successful FGCS alumni (Jones, Eveland, & Besong, 2022). Additionally, there is a critical need for culturally sensitive counseling services that can help FGCS navigate the

complexities of balancing academic responsibilities with familial and cultural expectations (Morton et al., 2018). By recognizing and addressing the unique challenges faced by FGCS in rural Punjab, stakeholders can work towards creating a more inclusive and supportive educational environment that enables these students to thrive.

In summary, first-generation college students in rural Punjab face a multitude of challenges that hinder their academic success, ranging from financial and cultural barriers to inadequate academic preparation and geographic isolation. These challenges highlight the need for comprehensive support systems that can provide FGCS with the resources, guidance, and encouragement they need to navigate the complexities of higher education. By addressing these barriers, stakeholders can help ensure that FGCS have the opportunity to achieve their educational and career goals, thereby contributing to the broader goal of social and economic mobility in rural communities.

Literature Review

Stough-Hunter and Lekies (2023) highlighted that rural FGCS face compounded difficulties due to the intersection of their first-generation status and rural identity. Their study emphasized the importance of sociological perspectives in addressing these challenges, including social class, community influence, and cultural barriers. The authors argued that rural FGCS often lack the social capital and support systems that are more readily available to urban students, which negatively impacts their college persistence and success.

Jones, Eveland, and Besong (2022) conducted a comprehensive review of literature examining FGCS across different geographic settings, including urban, suburban, and rural areas. Their findings revealed that rural FGCS face distinct challenges related to academic preparation, persistence, and non-academic influences such as familial responsibilities and cultural expectations. This study underscored the need for retention programs tailored specifically to the needs of rural FGCS, as overgeneralized support services often fail to address the unique barriers these students face.

An ethnographic case study by **Beasley (2016)** explored the college pathways of rural FGCS and the influence of cultural legacies on their educational journeys. The study found that strong family attachments significantly influenced students' decisions about whether to pursue higher education. Beasley's research highlighted that the lack of economic opportunities in rural areas often led students to weigh the benefits of staying close to home against the potential gains from obtaining a college degree. The study called for policies that involve families in the college decision-making process, replicating family support models to enhance FGCS retention and success.

McCulloh (2020) explored the role of parental support in the retention of rural FGCS attending a small, private university. Using a case study design, the research found that parental support was a critical factor in student retention, though the nature and extent of this support varied widely. The study identified that extended family and community support also played significant roles in supporting these students. McCulloh concluded that FGCS from rural backgrounds often rely on a spectrum of social capital sources to persist in their educational pursuits, suggesting that institutions should foster these support networks more intentionally.

Aruguete and Katrevich (2017) examined the academic and social support needs of FGCS, highlighting the disparities between first-generation and continuing-generation students in terms of academic performance and faculty engagement. Their study found that FGCS typically have lower grades and less contact with faculty, which are critical factors influencing their academic success. The researchers advocated for the development of targeted programs that enhance academic skills and improve the social environment for FGCS, emphasizing the need for a more inclusive approach to student support services.

In a phenomenological study, **Evans et al. (2020)** explored the lived experiences of FGCS attending both rural community colleges and large public universities. Their findings confirmed that FGCS face challenges related to

a lack of social capital, academic preparation, and financial resources. The study also noted differences in the awareness and availability of support services between students attending rural and urban institutions, suggesting that rural FGCS might have less access to essential resources that aid in their transition to college **Michel and Durdella (2019)** conducted an ethnographic study on first-year, first-generation, low-income Latino/a college students, examining their transition experiences from high school to four-year universities. The study found that maintaining communication and building relationships with peers, faculty, and family were crucial for navigating the educational system. This research underscored the importance of familial support in facilitating a smoother transition to college, highlighting that such support is often lacking for FGCS, especially in rural contexts where access to educational resources and guidance may be limited

Finally, **Johnson (2011)** focused on rural first-generation female students in Tanzania, revealing the socio-cultural and policy-related barriers these students face in accessing higher education. The study used ethnography to capture the experiences of women navigating the challenges of balancing traditional gender roles with academic aspirations. Johnson's work highlighted the resilience of these students and the critical role of confidence and determination in overcoming societal expectations, which is also relevant in understanding the experiences of rural FGCS in other contexts like Punjab.

These studies collectively illustrate the multifaceted challenges that rural FGCS face, including cultural barriers, lack of social and academic support, and economic constraints. The insights gained from these works underscore the importance of developing targeted interventions that address the specific needs of FGCS in rural settings, ensuring that these students receive the support necessary to succeed in higher education. Despite the extensive research on the challenges faced by first-generation college students, there is a notable gap in the literature regarding the specific experiences of FGCS in rural Punjab, particularly from an ethnographic perspective. Most existing studies have focused on general barriers or have used quantitative methods, which may not fully capture the nuanced, lived experiences of these students. This study aims to fill this gap by employing an ethnographic approach to explore the unique cultural, social, and economic factors that influence the educational journeys of FGCS in rural Punjab. Understanding these factors is crucial for developing culturally relevant and context-specific support mechanisms that can enhance educational outcomes for these students, ultimately contributing to broader efforts of educational equity and social mobility in rural communities.

Research Methodology
Research Design
This study employed an ethnographic research design to explore the challenges faced by first-generation college students (FGCS) in rural Punjab. Ethnography was chosen as the research method because it allows for an in-depth examination of the lived experiences, cultural contexts, and social dynamics that influence the educational journeys of FGCS. The study focused on capturing the voices and narratives of the students through direct engagement in their environments, which is critical for understanding the complex interplay of factors that affect their educational outcomes.

Data Collection
Data were collected through in-depth, semi-structured interviews with first-generation college students enrolled in public colleges in rural districts of Punjab. The selection of participants was based on purposive sampling, targeting students who met the criteria of being first-generation college attendees from rural backgrounds. The interviews were conducted in the local language (Punjabi) to facilitate comfort and authenticity in responses. The primary aim was to gather qualitative data on students' personal experiences, challenges, and perceptions regarding their educational paths.

Table 1: Data Collection Source and Details

Aspect	Description
Source	Semi-structured interviews

Aspect	Description
	with first-generation college students
Sample Size	30 participants
Sampling Method	Purposive sampling targeting FGCS from rural public colleges in Punjab
Interview Duration	45-60 minutes per interview
Interview Location	Participants' colleges in rural Punjab
Interview Structure	Semi-structured with open-ended questions to explore educational challenges, support systems, and aspirations
Ethical Considerations	Informed consent obtained; confidentiality and anonymity maintained

The interviews were designed to elicit detailed narratives from the participants, focusing on their educational experiences, the challenges they faced, and the support systems available to them. The use of a semi-structured format allowed for flexibility in probing deeper into relevant topics that emerged during the conversations. This approach facilitated the collection of rich, contextual data that is essential for understanding the specific challenges of FGCS in rural Punjab.

Data Analysis

The qualitative data collected from the interviews were analyzed using thematic analysis. This method was chosen because it allows for the identification, analysis, and reporting of patterns (themes) within the data, providing a nuanced understanding of the participants' experiences. The data analysis aimed to provide a comprehensive understanding of the lived experiences of FGCS, highlighting the complex and intersecting factors that impact their educational journeys. By employing thematic analysis, the study was able to move beyond surface-level observations and offer in-depth insights into the cultural, social, and economic dimensions of the students' challenges.

This methodological approach ensures that the findings are grounded in the participants'

perspectives, providing valuable contributions to the literature on first-generation college students and informing the development of culturally relevant support strategies in rural educational contexts.

Results and Analysis

The analysis of the data collected through semi-structured interviews with first-generation college students in rural Punjab revealed several key themes related to their educational experiences and challenges. The results are presented in the following tables, each accompanied by an interpretation and discussion of the findings.

Table 2: Demographic Characteristics of Participants

Characteristic	Frequency	Percentage (%)
Gender		
Male	18	60
Female	12	40
Age Group		
18-20 years	10	33.3
21-23 years	15	50
24-26 years	5	16.7
Family Income Level		
Below ₹50,000/year	14	46.7
₹50,001 - ₹100,000/year	12	40
Above ₹100,000/year	4	13.3

Interpretation: The demographic profile of the participants indicates a majority male representation (60%), with a significant portion (50%) falling within the 21-23 age group. The financial background of the students shows that nearly half (46.7%) of the participants come from families earning below ₹50,000 annually, which highlights the economic challenges faced by these students. The distribution across income levels reflects the broader socio-economic diversity within rural Punjab, where most students belong to low-income families. This economic context is crucial as it directly impacts their access to

educational resources and their ability to sustain their studies without significant financial strain.

Table 3: Primary Educational Challenges Reported by Participants

| Challenge	Frequency	Percentage (%)
Financial Constraints	24	80
Lack of Academic Preparation	18	60
Limited Access to Learning Resources	20	66.7
Cultural and Family Expectations	15	50
Language Barriers	10	33.3

Primary Educational Challenges Reported by Participants
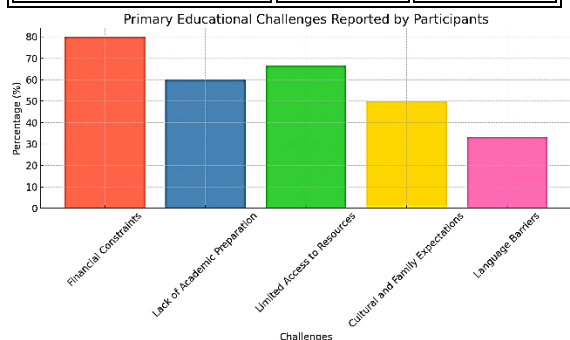
Interpretation: The most commonly reported challenge among participants was financial constraints, with 80% of students identifying this as a major barrier to their education. This is consistent with the income data presented earlier and underscores the difficulty FGCS face in affording college-related expenses such as tuition, books, and transportation. Additionally, 66.7% of students cited limited access to learning resources, including textbooks and internet facilities, which are often scarce in rural areas. Academic preparation was another significant issue, reported by 60% of students, reflecting the inadequacies of primary and secondary education systems in preparing students for higher education. Cultural and family expectations, along with language barriers, were also notable challenges, highlighting the complex interplay between personal, familial, and academic factors that affect these students' college experiences.

Table 4: Sources of Support Utilized by Participants

Source of Support	Frequency	Percentage (%)
Parental Support	12	40
Peer Support	18	60
Faculty Mentorship	10	33.3
Scholarships and Financial Aid	8	26.7
Community Support	6	20

Sources of Support Utilized by Participants
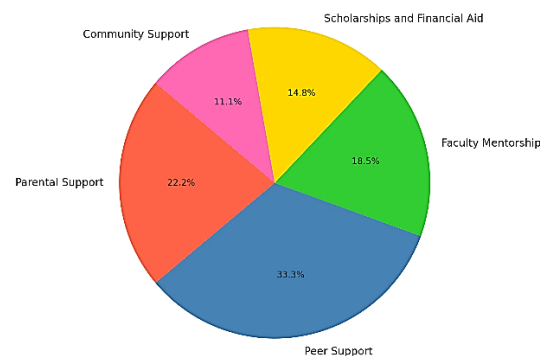
Interpretation: Peer support emerged as the most significant source of assistance, with 60% of students relying on friends and classmates for academic and emotional support. Parental support was reported by 40% of participants, indicating a gap in familial understanding and encouragement of higher education pursuits, which is consistent with previous findings on the lack of social capital among FGCS families. Faculty mentorship was less prevalent, utilized by only 33.3% of students, suggesting a need for increased engagement from educators to support these students. Financial aid and scholarships were accessed by just 26.7% of participants, reflecting both the scarcity of such opportunities in rural Punjab and potential barriers to accessing these resources.

Table 5: Impact of Challenges on Academic Performance

Impact on Performance	Frequency	Percentage (%)
Decreased Academic Motivation	20	66.7
High Stress Levels	22	73.3
Poor Academic Performance	18	60
Increased Absenteeism	12	40

Impact on Performance	Frequency	Percentage (%)
Consideration of Dropping Out	10	33.3

Trend of Impact on Academic Performance

Preferred Interventions Suggested by Participants
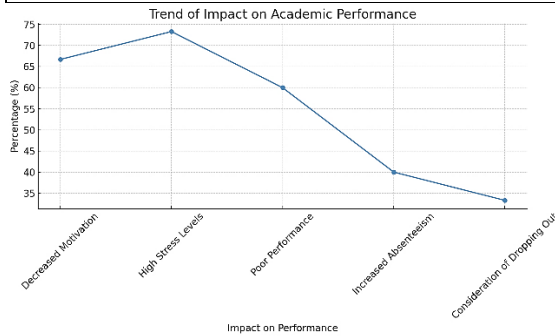
Interpretation: The challenges faced by FGCS in rural Punjab have a profound impact on their academic performance and overall well-being. High stress levels were reported by 73.3% of participants, which is linked to the financial and academic pressures they encounter. Decreased academic motivation was also common, affecting 66.7% of students, and this lack of motivation can be attributed to the compounding effects of their various challenges. Poor academic performance was noted by 60% of students, further exacerbated by increased absenteeism (40%) due to the need to balance work and family responsibilities. Alarmingly, 33.3% of participants reported considering dropping out of college, highlighting the critical need for targeted interventions to support these students and prevent attrition.

**Table 6: Preferred Interventions Suggested by Participants**

Suggested Intervention	Frequency	Percentage (%)
Increased Financial Aid	25	83.3
Access to Academic Tutoring Services	18	60
Enhanced Mentorship Programs	15	50
Improved Learning Resources	20	66.7
Family Involvement Initiatives	12	40
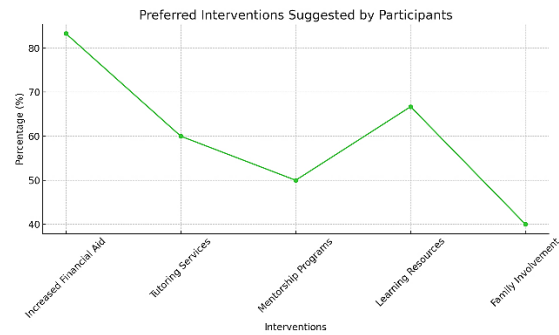
Interpretation: Participants expressed a strong preference for increased financial aid, with 83.3% suggesting this as the most critical intervention needed to support their education. This aligns with the financial challenges identified earlier and indicates that easing the economic burden could significantly enhance their educational experience. Access to academic tutoring services was another key recommendation, with 60% of students highlighting the need for additional academic support. Enhanced mentorship programs and improved learning resources were also frequently suggested, emphasizing the importance of a holistic support system that addresses both academic and socio-emotional needs. Family involvement initiatives were noted by 40% of participants, indicating a recognition of the need to bridge the gap between familial expectations and academic aspirations.

Table 7: Student Recommendations for Institutional Improvements

Institutional Improvement	Frequency	Percentage (%)
More Accessible Counseling Services	18	60
Flexible Attendance Policies	14	46.7
Better Communication of Resources	12	40
Increased Engagement from Faculty	16	53.3
Culturally Relevant Curriculum	10	33.3

Student Recommendations for Institutional Improvements
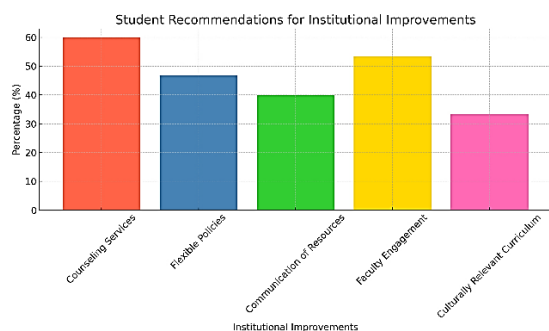
Interpretation: Students identified the need for more accessible counseling services as a priority, with 60% suggesting that such services would help them better manage stress and navigate the challenges of college life. Flexible attendance policies were recommended by 46.7% of participants, reflecting the reality of balancing academic and non-academic responsibilities. Better communication of available resources was another suggestion, as 40% of students felt unaware of the support services offered by their institutions. Increased faculty engagement was highlighted by 53.3% of participants, indicating a desire for stronger connections with their instructors. Additionally, 33.3% of students recommended a more culturally relevant curriculum that acknowledges and incorporates their unique backgrounds and experiences.

The findings from this study reveal that first-generation college students in rural Punjab face significant and multifaceted challenges that affect their academic success and overall well-being. The dominant issues of financial constraints, limited academic preparation, and inadequate support systems underscore the urgent need for targeted interventions that are culturally and contextually appropriate. The students' recommendations for institutional improvements and increased support highlight the potential pathways for enhancing their educational experiences and outcomes. By addressing these challenges through a comprehensive and inclusive approach, educational institutions in rural Punjab can better support first-generation college students, ultimately contributing to broader efforts to promote educational equity and social mobility in rural communities.

Discussion

The findings from this study provide a comprehensive understanding of the unique challenges faced by first-generation college students (FGCS) in rural Punjab. By employing an ethnographic approach, this research sheds light on the nuanced, lived experiences of these students, offering insights that extend beyond the general barriers commonly discussed in the existing literature. This discussion section aims to analyze and interpret the results presented in Section 4, comparing them with the scholarly works reviewed in Section 2, and explores how these findings address the identified literature gap. The implications and significance of these findings are also discussed, providing a deeper understanding of the educational landscape for FGCS in rural Punjab.

Comparison with Existing Literature

The demographic data collected in this study align with the broader trends observed in rural educational settings, as discussed in previous studies. The overrepresentation of male students (60%) and the predominance of low-income families (46.7% earning below ₹50,000 annually) reflect the socio-economic realities of rural Punjab, which are consistent with findings from **Jones, Eveland, and Besong (2022)**, who noted similar demographic patterns among FGCS in rural areas. The prevalence of financial constraints as the most significant challenge (80%) mirrors the conclusions drawn by **McCulloh (2020)** and **Stough-Hunter and Lekies (2023)**, who emphasized the economic difficulties faced by FGCS due to limited family income and lack of financial aid. This study's detailed exploration of financial barriers specifically in the context of rural Punjab fills a crucial gap by highlighting the direct impact of these constraints on students' academic experiences.

The lack of academic preparation reported by 60% of participants is another key finding that aligns with the literature. **Beasley (2016)** and **Aruguete and Katrevich (2017)** both identified insufficient academic preparedness as a major hurdle for FGCS, particularly in rural settings where educational resources are scarce. This study adds to the existing body of knowledge by contextualizing academic underpreparedness within the rural Punjabi

environment, where inadequate schooling and limited access to technology exacerbate these challenges. The significant percentage of students citing limited access to learning resources (66.7%) underscores the systemic issues within rural educational infrastructure, which is a critical area for policy intervention.

Cultural and family expectations were also prominent challenges, affecting 50% of participants. This finding echoes the work of **Michel and Durdella (2019)**, who highlighted the complex cultural dynamics that shape the educational aspirations and outcomes of FGCS, particularly those from minority or rural backgrounds. In rural Punjab, these cultural expectations often manifest as pressure to prioritize familial responsibilities over educational pursuits, which adds another layer of difficulty for FGCS. By specifically examining these cultural factors, this study contributes to a more nuanced understanding of how cultural and familial influences can serve as both motivators and barriers for FGCS in rural communities.

The study's findings on the sources of support utilized by participants reveal the critical role of peer support, which was the most commonly cited source of assistance (60%). This finding is consistent with **Evans et al. (2020)**, who noted the importance of peer networks for FGCS in rural areas, as they often lack familial and institutional support. The lower prevalence of faculty mentorship (33.3%) and scholarships (26.7%) points to significant gaps in institutional support systems, highlighting the need for more proactive engagement from educators and better access to financial aid. These insights align with the recommendations from **Aruguete and Katrevich (2017)**, who advocated for enhanced academic and social support mechanisms tailored to the specific needs of FGCS.

Addressing the Literature Gap

One of the primary gaps identified in the literature was the lack of ethnographic studies focusing specifically on FGCS in rural Punjab. This study fills that gap by providing an in-depth exploration of the unique challenges faced by these students, using qualitative data to capture their lived experiences. The use of semi-structured interviews allowed for a detailed examination of how financial constraints, cultural expectations, and academic underpreparedness intersect to shape the educational trajectories of FGCS. This ethnographic approach provides a richer, more contextually grounded understanding of these challenges, which is often missing in broader quantitative studies.

Moreover, this study highlights the specific cultural and socio-economic dynamics of rural Punjab, which differ from those of other rural settings explored in the existing literature. For instance, while **Beasley (2016)** discussed the impact of rural culture on college-going behaviors, this study delves deeper into the particular cultural expectations prevalent in rural Punjabi communities, such as the prioritization of familial duties and economic contributions over education. By situating the findings within the specific context of rural Punjab, this research offers valuable insights into the localized factors that influence FGCS, thereby addressing the need for more region-specific studies in the field.

Implications and Significance of Findings

The findings of this study have significant implications for policymakers, educators, and institutions aiming to improve the educational outcomes of FGCS in rural Punjab. The high prevalence of financial constraints among participants underscores the urgent need for increased financial aid and scholarships tailored to FGCS. Institutions should prioritize expanding access to financial resources, simplifying the application processes for scholarships, and actively informing students about available financial support options. Addressing the economic barriers faced by FGCS is critical to reducing dropout rates and improving academic persistence.

Academic preparation and access to learning resources are also critical areas that require attention. The results suggest that strengthening the primary and secondary education systems in rural Punjab is essential for ensuring that students are adequately prepared for higher education. Initiatives such as bridging programs, academic tutoring, and enhanced learning resources (e.g., digital

libraries and access to technology) can help close the preparedness gap identified in this study. Additionally, targeted interventions that address specific academic needs, such as language support and foundational skills training, could significantly improve FGCS outcomes.

The role of cultural and family expectations in shaping FGCS experiences cannot be overlooked. Educational institutions should consider implementing family involvement initiatives that engage parents and guardians in the college experience, helping them understand the value of higher education and how to support their children's academic journeys. Workshops, informational sessions, and community outreach programs can bridge the gap between familial expectations and educational aspirations, fostering a more supportive environment for FGCS.

Furthermore, the reliance on peer support highlights the importance of fostering strong peer networks within educational institutions. Creating opportunities for peer mentorship, study groups, and social integration can enhance the overall support system for FGCS. Institutional efforts to cultivate a sense of community among FGCS, such as dedicated student groups or support clubs, can help mitigate feelings of isolation and increase engagement.

The recommendations for institutional improvements, such as more accessible counseling services, flexible attendance policies, and culturally relevant curricula, reflect the need for institutions to adopt a more inclusive and student-centered approach. Counseling services that are easily accessible and culturally sensitive can help FGCS manage stress and navigate the complexities of college life. Flexible attendance policies that account for the unique challenges faced by FGCS, such as balancing work and family responsibilities, can also improve retention and academic performance. Additionally, curricula that acknowledge and incorporate the diverse cultural backgrounds of students can create a more inclusive learning environment that resonates with FGCS.

In conclusion, this study provides valuable insights into the challenges faced by first-generation college students in rural Punjab and offers evidence-based recommendations for addressing these challenges. By filling the identified literature gap through an ethnographic approach, this research enhances our understanding of the complex factors that influence FGCS in this specific context. The findings underscore the importance of targeted, culturally relevant support mechanisms that address the financial, academic, and socio-emotional needs of FGCS, ultimately contributing to broader efforts to promote educational equity and social mobility in rural communities. The implications of this study extend beyond rural Punjab, offering lessons that can inform policies and practices aimed at supporting FGCS in similar rural settings globally.

Conclusion

This study aimed to explore the unique challenges faced by first-generation college students (FGCS) in rural Punjab through an ethnographic approach, providing a detailed understanding of their lived experiences. The findings reveal that FGCS in rural Punjab face a complex interplay of financial, academic, cultural, and social barriers that significantly impact their educational journeys. Financial constraints emerged as the most pervasive challenge, with the majority of participants struggling to afford college-related expenses. This financial burden is exacerbated by the limited availability of scholarships and financial aid, reflecting broader systemic issues within rural educational funding. The lack of academic preparation due to inadequate primary and secondary schooling further compounds these challenges, leaving many FGCS ill-equipped to meet the demands of higher education.

Cultural and familial expectations also play a significant role in shaping the educational experiences of FGCS. In rural Punjab, traditional values and familial responsibilities often conflict with the pursuit of higher education, particularly for female students. This study found that many FGCS face pressure to conform to family expectations, which can lead to prioritizing household or economic contributions over academic endeavors. The lack of understanding and support from

families, who may not have experienced higher education themselves, adds another layer of difficulty for these students. Despite these barriers, peer support was identified as a critical source of assistance, highlighting the importance of social networks in helping FGCS navigate the challenges of college life.

The study also uncovered significant gaps in institutional support for FGCS. While some students benefit from faculty mentorship, many reported a lack of engagement and support from educators, pointing to the need for more proactive institutional efforts to connect with FGCS. The limited access to academic resources, such as tutoring and learning materials, further hinders these students' ability to succeed. Participants suggested several interventions to address these gaps, including increased financial aid, improved access to academic tutoring services, and enhanced mentorship programs. The desire for more culturally relevant curricula and greater involvement of families in the educational process were also emphasized, underscoring the need for a more holistic approach to supporting FGCS.

The broader implications of this research extend beyond rural Punjab, as the challenges identified in this study are reflective of the experiences of FGCS in similar rural and low-income contexts globally. The findings highlight the critical need for targeted interventions that address the specific financial, academic, and socio-cultural barriers faced by FGCS. Policymakers and educational institutions must prioritize the development of support systems that are not only accessible but also tailored to the unique needs of FGCS in rural areas. This includes increasing the availability of financial aid, enhancing academic support services, and fostering a more inclusive educational environment that recognizes and respects the diverse cultural backgrounds of these students.

Furthermore, this research underscores the importance of involving families and communities in the educational journey of FGCS. By bridging the gap between home and school environments, institutions can create a more supportive framework that encourages academic persistence and success. Community engagement initiatives, such as informational workshops and outreach programs, can play a pivotal role in changing perceptions about higher education and building stronger support networks for FGCS. Additionally, the study's findings suggest that fostering peer networks and creating spaces for FGCS to connect and share their experiences can mitigate feelings of isolation and build resilience among these students.

Ultimately, this study contributes to the broader discourse on educational equity and access by highlighting the need for context-specific strategies that address the distinct challenges faced by FGCS in rural settings. The insights gained from this research provide valuable guidance for designing policies and programs that not only support FGCS in rural Punjab but also offer lessons that can be applied in similar contexts worldwide. By acknowledging and addressing the unique barriers faced by FGCS, stakeholders can work towards creating a more inclusive and equitable educational landscape that empowers these students to achieve their full potential and contribute meaningfully to their communities.

In conclusion, this study emphasizes the importance of a comprehensive, culturally sensitive approach to supporting first-generation college students in rural Punjab. Addressing the financial, academic, and social challenges they face requires a concerted effort from policymakers, educators, and community members alike. By implementing targeted interventions and fostering a supportive educational environment, it is possible to improve the educational outcomes of FGCS and promote broader social mobility in rural communities. The findings of this study serve as a call to action for all stakeholders to recognize the value of investing in the education of FGCS and to commit to creating pathways that enable these students to thrive academically and personally.

References

- Aruguete, M., & Katrevich, A. V. (2017). Recognizing Challenges and Predicting Success in First-Generation University Students. *Journal of STEM Education: Innovations and Research*, 18, 40-44.

- Beasley, S. (2016). Country Roads Take Me …?: A Cultural Analysis of College Pathways among Rural, First-Generation Students. *Research in the Sociology of Education*, 22. https://doi.org/10.1108/S0196-115220160000022005.

- Bui, K. V. T. (2002). First-generation college students at a four-year university: Background characteristics, reasons for pursuing higher education, and first-year experiences. *College Student Journal*, 36(1), 3-11.

- Evans, R., Stansberry, D., Bullington, K., & Burnett, D. D. (2020). First in College: A Qualitative Exploration of Experiences of First-Generation Students. *Inquiry: Critical Thinking Across the Disciplines*, 23(1), 5.

- Howley, C., Chavis, B., & Kester, J. (2013). "Like Human Beings": Responsive Relationships and Institutional Flexibility at a Rural Community College. *Journal of Research in Rural Education*, 28, 1-14.

- Johnson, M. P. (2011). Women's Access to Higher Education in Tanzania: A Qualitative Study. https://doi.org/10.17077/ETD.YAHSU9IU.

- Jones, F., Eveland, T. J., & Besong, B. (2022). Contrasting Challenges of Urban, Suburban, and Rural First-Generation College Students to Improve Retention Programs. *Journal of Underrepresented & Minority Progress*. https://doi.org/10.32674/jump.v5i2.3126

- McCulloh, E. E. (2020). An Exploration of Parental Support in the Retention of Rural First-Generation College Students. *Journal of College Student Retention: Research, Theory & Practice*, 24, 144-168. https://doi.org/10.1177/1521025120907889

- Michel, R., & Durdella, N. R. (2019). Exploring Latino/a College Students' Transition Experiences: An Ethnography of Social Preparedness and Familial Support. *Journal of Latinos and Education*, 18, 53-67.

- Morton, T. R., Ramirez, N. A., Meece, J., Demetriou, C., & Panter, A. (2018). Perceived Barriers, Anxieties, and Fears in Prospective College Students from Rural High Schools. *The High School Journal*, 101(2), 155-176. https://doi.org/10.1353/hsj.2018.0008

- Stough-Hunter, A., & Lekies, K. S. (2023). Effectively Engaging First-Generation Rural Students in Higher Education: New Opportunities for Sociology. *Teaching Sociology*, 51(3), 301-309. https://doi.org/10.1177/0092055X231174516

FACTORS AFFECTING EMPLOYEE'S JOB SATISFACTION: A STUDY OF UT CHANDIGARH

Prachi Singla
Research Scholar
University Institute of Applied Management Sciences, Panjab University, Chandigarh

INTRODUCTION

Job satisfaction is one of the most popular and widely researched topics in the field of organizational psychology (Spector, 1997). Job satisfaction is defined as any combination of psychological, physiological, and environmental circumstances that cause a person to truthfully say, "I am satisfied with my job" (Hoppock, 1935). According to Cranny, Smith, and Stone (1992), job satisfaction can be defined as an employee's emotional state regarding their job, considering what they expected and what they actually received from it. Porter and Steers (1973) argue that the extent of employee job satisfaction reflects the cumulative level of 'met worker expectations'. Employees expect their job to provide a mix of features (e.g., pay, promotion, autonomy), but unmet expectations decrease satisfaction (Field, 2005).

Today's business environment is undergoing major transformational changes. Globalization, growing economies, innovation, and changing work culture present new challenges and create opportunities for industries. This study aims to explore how these factors impact employee job satisfaction across various age groups.

REVIEW OF LITERATURE

Several studies highlight factors influencing job satisfaction across different sectors:

- **Gao and Binbin (2021)** surveyed 286 staff from nature reserves in China, concluding that 63.6% were satisfied with their jobs, though dissatisfaction was noted regarding fringe benefits and promotion opportunities.

- **Maaravi et al. (2021)** studied job satisfaction among interns in startups, identifying learning opportunities, supervisor support, and organizational atmosphere as pivotal factors.

- **Alrawahi et al. (2020)** applied Herzberg's two-factor theory to clinical laboratories in Omani hospitals, identifying high workload, poor appraisal systems, and poor salaries as key dissatisfaction drivers.

- **Garcia et al. (2018)** studied social workers in Spain, finding that the nature of the job, pay, and working conditions were major determinants of job satisfaction.

- **Memon and Jena (2017)** explored workplace gender equality, finding a significant relationship between gender inequality and reduced job satisfaction among female employees in India.

NEED OF THE STUDY

Numerous studies have been conducted on job satisfaction. However, there is no consensus on the factors affecting it. Moreover, there is limited research focused on North India. The present study aims to

provide a fresh perspective on the factors influencing job satisfaction, taking into account variables such as age, gender, and location.

OBJECTIVE

The primary objective of this study is to identify the factors affecting employee job satisfaction.

RESEARCH METHODOLOGY

A quantitative study using the **Minnesota Satisfaction Questionnaire (MSQ)** was conducted. The MSQ is widely used for its reliability and ability to assess different aspects of the work environment. A five-point

Likert scale was employed, and data were collected through online surveys and physical forms. Snowball sampling was used to gather responses from 109 employees across various industries.

DESCRIPTIVE ANALYSIS

109 employees responded to the

questionnaire. Of these, 82.6% were male, and most respondents were between the ages of 20 to 30 years. The highest number of respondents were from the automobile sector (23%), followed by IT (18%).

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Gender	109	1	2	1.83	0.381
Age	109	2	5	2.44	0.751

FACTOR ANALYSIS

Factor analysis is a data reduction technique used to identify underlying factors. The analysis revealed five key factors influencing job satisfaction:

1. **Work Environment**: The most significant factor, with ten items loaded on it, including supervisor competencies and reward programs.

2. **Ownership**: Items related to responsibility and social status.

3. **Leadership Opportunities**: Opportunities to lead and help others.

4. **Independence**: Job security and freedom to work independently.

5. **Job Involvement**: How engaged employees are in their work.

CONCLUSION

The analysis identified five major factors affecting job satisfaction, with the work environment being the most critical. Recommendations include improving the work environment and recognition programs to enhance employee satisfaction.

LIMITATIONS

Due to COVID-19, data collection was primarily conducted online, limiting sample diversity. Future studies could include a larger sample and more representative demographic factors. Additionally, structural equation modeling (SEM) could be used to further analyze the impact of individual factors.

RECOMMENDATIONS

Future research could explore the correlation between factors and overall job satisfaction, as well as the moderating effects of age and gender on job satisfaction.

REFERENCES

- Abugre, J.B. (2014). Job Satisfaction of Public Sector Employees in Sub-Saharan Africa. *International Journal of Public Administration*, 37(10), 655-665.

- Alrawahi et al. (2020). Application of Herzberg's Two Factor Theory of Motivation. *Journal of Clinical Laboratories*.

- Garcia et al. (2018). Level of Job Satisfaction Among Social Workers in Spain. *Journal of Social Work*.

- Gao, Y., & Binbin, L. (2021). Evaluation of Job Satisfaction Among Nature Reserve Staff in China. *Elsevier Global Ecology and Conservation*.

- Memon, N.Z., & Jena, L.K. (2017). Gender Inequality, Job Satisfaction, and Motivation: Evidence from India. *Management and Labour Studies*, 42(3), 253-274.

Social Responsibility of Tech Giants: Facebook, Google, and Beyond

Dr. Sunil Kumar
Assistant Professor
Lala Hans Raj Memorial College of Education, Moga

Abstract

This paper explores the social responsibility of major tech companies, specifically focusing on Facebook and Google, and their roles in addressing data privacy, misinformation, and environmental concerns. Through the examination of existing literature and the latest data, this study highlights both the progress and challenges these companies face in fulfilling their ethical obligations. The growing regulatory and societal pressures on these corporations to act responsibly are analyzed, with a focus on their impact on user trust, privacy, and environmental sustainability.

Introduction

In today's digital age, tech giants such as Facebook, Google, Amazon, and Twitter have emerged as critical players in the domains of communication, data storage, and content dissemination. However, their rise to prominence has also been accompanied by intense scrutiny regarding their ethical responsibilities. Unlike traditional industries, these tech giants are held accountable not only for economic or environmental practices but also for the societal impact of their platforms—particularly issues related to data privacy, misinformation, and monopolistic behavior.

The increasing expectation for these companies to uphold ethical standards, protect user privacy, combat misinformation, and contribute positively to societal welfare poses significant challenges. This paper focuses primarily on the roles of Facebook and Google, analyzing their approaches to social responsibility and evaluating their commitments in the face of growing public and regulatory demands.

Review of Related Studies

Vosoughi, Roy, and Aral (2018) analyzed the dissemination of misinformation on Twitter over a ten-year period. Their study demonstrated that false news stories, particularly in the political domain, spread significantly faster and reached a broader audience compared to factual news. Misinformation was found to be 70% more likely to be retweeted than the truth. Vosoughi et al. concluded that platforms like Facebook and Twitter need to take greater responsibility in managing the spread of false content and mitigating its societal impact.

Rustad and Koenig (2019) examined Google's implementation of the "Right to be Forgotten" in Europe. The study highlighted the ethical tension between individual privacy and the public's right to information. Of the content removal requests submitted under the law, 89% were granted, but requests involving public interest, such as government or criminal records, were often denied. The authors emphasized ongoing debates over transparency and information accessibility.

Kaplan and Haenlein (2020) investigated Facebook's response to the Cambridge

Analytica scandal, which resulted in a 66% drop in user trust. Facebook invested heavily in enhancing data protection, including hiring over 30,000 employees dedicated to security efforts. The study found that restoring user trust was crucial to Facebook's CSR strategy in the wake of the scandal.

Carrigan and Attenborough (2021) explored Google's CSR initiatives, especially in environmental sustainability. Since 2007, Google has maintained carbon-neutral operations and aims to run entirely on renewable energy by 2030. Google's success in recycling 90% of its outdated electronic equipment has set a high standard for sustainability in the tech sector.

Zuboff (2022) critiqued the power tech giants like Facebook, Google, and Amazon hold through the use of personal data in her book *The Age of Surveillance Capitalism*. She argued that these companies operate with minimal transparency, especially in the U.S.,

where data protection regulations are weaker compared to Europe's GDPR. Zuboff highlighted the ethical dilemmas stemming from the companies' reliance on data-driven profit models.

Gillespie (2023) addressed government regulation in response to tech giants' growing influence. The study discussed the European Union's Digital Services Act, which mandates that platforms like Facebook and Google take greater responsibility for moderating harmful content and safeguarding user data. In 2023, both companies faced over $5 billion in GDPR fines for privacy violations.

2023 Market Performance and Regulatory Challenges of Facebook and Google

As of Q2 2023, Facebook remained the most widely used social media platform, with 2.98 billion monthly active users. Similarly, Google retained a 92.5% global search engine market share, reinforcing its dominance in digital advertising. Facebook generated $117.93 billion in ad revenue, comprising 98% of its total earnings, while Alphabet (Google's parent company) reported $224 billion in total revenue, with 80% stemming from digital advertising.

In terms of regulatory action, 2023 saw Meta (Facebook's parent company) fined $1.3 billion by the European Union for violating GDPR by transferring European user data to the U.S. Google also faced $746 million in fines for similar privacy violations. On the environmental front, Google continued to lead the tech industry in sustainability, maintaining carbon-neutral operations since 2007. Meanwhile, Facebook committed to reaching net-zero carbon emissions by 2030.

Conclusion

The growing influence of tech giants like Facebook and Google necessitates that they act with greater social responsibility. While both companies have made significant strides in addressing issues such as data privacy and environmental sustainability, they continue to face challenges regarding transparency, monopolistic behavior, and the dissemination of harmful content. The enforcement of stricter regulations, such as GDPR and the Digital Services Act, underscores the need for continued vigilance and accountability. Only by adhering to these standards can tech giants fulfill their social responsibilities and maintain the trust of their users in a rapidly evolving digital landscape.

References

Carrigan, M., & Attenborough, F. (2021). Tech giants and corporate social responsibility: The case of Google. *Journal of Corporate Social Responsibility*, 18(2), 123-136.

Gillespie, T. (2023). Regulating big tech: The role of governments. *Government Policy Review*, 15(1), 42-57.

Kaplan, A. M., & Haenlein, M. (2020). Corporate social responsibility in the digital era: Facebook's role in data privacy. *Journal of Business Ethics*, 164(2), 193-210.

Rustad, M. L., & Koenig, T. H. (2019). Google and the right to be forgotten. *International Journal of Law and Information Technology*, 27(1), 1-20.

Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, 359(6380), 1146-1151.

Zuboff, S. (2022). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.

Role of Creativity: Impact and Importance of Creativity in Different School Subjects

Dr. Indu Sudhir
Assistant Professor
Khalsa College of Education, Amritsar
Email: dr.indusudhir@gmail.com

Abstract

Creativity is a potential force that influences human activity in almost all spheres of life. Recognized as a precious source of emergence, development, and survival of human culture through ages, creativity is essential in modern education. Educational reforms should aim to encourage students to explore both the "know-why" and "know-how" of learning. Teachers, viewed as both instructors and designers, play a pivotal role in fostering creativity. The training of educators should support them in their creative endeavors, helping students develop new ideas and products. This paper discusses the significance of teaching creativity and explores whether education systems should focus on teaching creativity or teaching for creativity.

Keywords: Creativity, Educators, Teachers, Students, Classroom

Introduction

Creativity, derived from the Indo-European root "kere" meaning to grow, refers to the ability to create something novel. Creativity, in its essence, involves originality, uniqueness, and uncommonness. It has been recognized as a vital force that influences human activity across various spheres of life, contributing significantly to culture, science, and education.

In an educational context, creativity is crucial for developing students' problem-solving skills, critical thinking, and the ability to adapt to new situations. When the arts and creative activities are central to education, students can unleash their creative potential, moving beyond the absorption of facts toward envisioning and pursuing new ideas.

Components of Creativity

Creativity encompasses various traits and abilities, including:

- **Farsightedness:** The ability to anticipate future possibilities.

- **Originality:** The uniqueness of ideas.

- **Persistence:** Continuous effort toward creative goals.

- **Fluency:** The ability to generate multiple ideas.

- **Curiosity:** A desire to explore and understand.

- **Humor:** Light-heartedness that can open up new ways of thinking.

- **Flexibility:** The capacity to adapt to new situations and ideas.

- **Elaboration:** The ability to add detail to an idea.

- **Imagination:** The power to visualize new possibilities.

- **Openness to Experience:** A willingness to embrace the unknown.

- **Rebelliousness:** Challenging the status quo to create something new.

These components, when nurtured in a classroom environment, can foster creativity in students and promote an engaging and enriching learning experience.

The Role of Teachers in Nurturing Creativity

A teacher's role in fostering creativity is multifaceted. They are not just instructors but also role models for creative thinking. Teachers should use their imagination, incorporate humor in lessons, and relate content to real-world situations. Additionally, they should encourage students to take risks and explore new ideas.

When students are creative, they often:

- **Question and challenge:** They do not necessarily follow the rules and seek to understand the world differently.

- **Make connections:** Creative students think laterally, connecting unrelated concepts.

- **Imagine alternatives:** They ask "what if?" and look at things from different viewpoints.

- **Explore ideas:** They experiment with new ideas and keep an open mind.

- **Reflect critically:** They seek feedback and refine their ideas.

Agents of Creative Education

Creative education is influenced by two primary agents:

1. **Philosophical/Psychological Agent:** This includes fostering a joy for mystery, openness to new experiences, and the courage to take creative risks.

2. **Technical Agent:** This focuses on stimulating curiosity and imagination through specially designed curricula and teaching methods.

Developing Creativity in the Classroom

Creativity can be developed in students through several approaches:

- **Extended time for exploration:** Allow students to take their time in completing tasks and developing their ideas.

- **Inviting classroom environment:** Provide spaces for quiet reflection and exploration of unfinished work.

- **Abundant resources:** Ensure that students have access to a variety of materials for creative endeavors.

- **Mistakes and risk-taking:** Create a climate where mistakes are seen as learning opportunities, and autonomy is encouraged.

Teachers must model creativity for their students, showing them how to think divergently, experiment with new ideas, and engage with learning in innovative ways.

Teacher Training Policies

To foster creativity in education, teacher training programs should focus on selecting teachers who are not only knowledgeable in their subject areas but also creative and innovative. The following are key considerations for teacher training:

- **Who should become a teacher?** Identifying the right individuals who can inspire creativity in their students is crucial.

- **What skills should teachers gain?**
  Teachers should develop the ability to

- **What skills should teachers gain?**
  Teachers should develop the ability to

create engaging, creative learning environments.

- **How can we create creative learning atmospheres?**
  Teacher training programs should focus on encouraging prospective teachers to actualize their creative potential and become role models.

Conclusion

Creative education is essential for preparing students for the challenges of the future. By encouraging students to think creatively, solve problems, and adapt to new situations, education systems can help them lead richer lives and contribute meaningfully to society. Governments and educational institutions must prioritize creativity in their policies, ensuring that teachers have the autonomy and support needed to inspire creativity in their students.

References

Cramond, B. (1995). The Coincidence of Attention Deficit Hyperactivity Disorder and Creativity. *The National Research Center on the Gifted and Talented*.

Getzels, J.W., & Jackson, P.W. (1962). *Creativity and Intelligence*. New York: Wiley.

Giincer, B., & Oral, G. (1993). Relationship between creativity and nonconformity to school discipline as perceived by the teachers of Turkish elementary school children. *Journal of Instructional Psychology*, 20(3), 208-214.

McCrae, R.R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258-1265.

Wallach, M., & Kogan, N. (1965). *Modes of Thinking in Young Children*. New York: Holt, Rinehart and Winston.