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ORIGINAL ARTICLE

Inside the Classroom: Students' Perception of their Department

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ABSTRACT

This survey aimed to assess students' perceptions of their departments at GBPUAT, Pantnagar, focusing on academics, infrastructure, student support, and overall learning environment. Responses from students indicated a generally positive academic experience, with most students agreeing that the curriculum is relevant, teaching methods are effective, and evaluation processes are fair. While laboratory and library facilities were rated satisfactory, classroom infrastructure received lower ratings, highlighting a need for improvement. Students appreciated research opportunities and workshops, though career guidance and extracurricular support were seen as moderate. The departmental environment was viewed positively, with strong communication, inclusiveness, and motivation reported. Overall, the study concludes that students have a favourable perception of their departments, but improvements in physical infrastructure and career development services are recommended to enhance student satisfaction and learning outcomes.

KEYWORDS

• Perception • Students • Department

INTRODUCTION

Govind Ballabh Pant University of Agriculture and Technology (GBPUAT), located in Pantnagar, Uttarakhand, is India's first agricultural university established in 1960. It was founded to promote agricultural education, research, and extension, playing a pioneering role in India's Green Revolution. The university is renowned for its strong academic programs, innovative research, and significant contributions to agricultural development and rural upliftment.

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Students' perception of their department plays a significant role in shaping their academic experience, learning outcomes, and overall satisfaction with higher education. A department serves as the primary academic environment where students interact with faculty, curriculum, infrastructure, and administrative support systems. Therefore, understanding how students perceive their department is essential for improving the quality of education and institutional effectiveness.

Perception refers to the way individuals interpret and evaluate their experiences based on personal, social, and academic factors. In the academic context, students' perceptions are influenced by various elements such as teaching–learning processes, faculty competence, curriculum relevance, availability of learning resources, research opportunities, and departmental culture. Positive perceptions can enhance students' motivation, engagement, and academic performance, whereas negative perceptions may lead to dissatisfaction, low morale, and poor academic outcomes.

In recent years, higher education institutions have increasingly emphasized student-centered learning and quality assurance mechanisms. Feedback and perception studies have become important tools for assessing departmental strengths and identifying areas that require improvement. Such studies provide valuable insights for academic planners, administrators, and faculty members to design effective strategies for curriculum development, teaching innovation, and student support services.

The present study focuses on examining the perception of students about their department in order to assess their level of satisfaction, identify key factors influencing their views, and suggest measures for enhancing the overall academic environment. By systematically analyzing students' perceptions, the study aims to contribute to continuous quality improvement and promote a more responsive and supportive departmental framework.

RESEARCH METHODOLOGY

The present study is a cross-sectional descriptive study as it attempts to finds the students' perceptions about their departments in College of Agriculture and Technology, GBPUAT. Sampling and Data Collection: For the present study, the data were collected from twenty two University students of different departments of GBPUAT. A structured questionnaire with Likert-scale questions was used to gather responses on four aspects: Academics, Infrastructure, Student Support, and Environment.

RESULTS AND DISCUSSION

The result and discussion are given as following:

Table 1: Socio-economic characteristics of respondents

General Information		
Particulars	**No. of Respondents**	**% of Responses**
Gender		
Male	9	40
Female	13	60
Age		
18-21	3	14
21-25	19	86
Class		
Bachelors	3	14
Masters	19	86
Year		
1st	15	69
2nd	6	30
3rd	1	1
College		
College of Agriculture	17	61
College of Technology	5	39

Based on the general information collected from the respondents, the results indicate a diverse representation of students. With regard to gender, a majority of the respondents were female (60%), while male students constituted 40% of the sample. In terms of age distribution, most of the respondents (86%) belonged to the 21–25 years age group, whereas only 14% were in the 18–21 years category, indicating that the sample largely consisted of mature undergraduate and postgraduate students.

Regarding academic level, the findings reveal that a significant proportion of respondents (86%) were pursuing Master's degree programmes, while only 14% were enrolled in Bachelor's degree programmes. The distribution by year of study shows that the majority of students were in the first year (69%), followed by those in the second year

(30%), while only 1% of the respondents belonged to the third year.

With respect to college affiliation, most of the respondents (61%) were from the College of Agriculture, whereas 39% represented the College of Technology. Overall, the results suggest that the respondents were predominantly female, postgraduate, first-year students, mainly drawn from the College of Agriculture.

Table 2: Perception of students towards department

Questions	No. of Respondents	Percentage of responses (%)
Section A: Academics		
Curriculum of the department is relevant to current industry/ field requirements		
Strongly Disagree	0	0
Disagree	3	15
Neutral	3	15
Agree	11	55
Strongly Agree	3	15
Balance between theory and practical learning		
Strongly Disagree	1	5
Disagree	1	5
Neutral	4	20
Agree	11	55
Strongly Agree	3	15
Exposure to real-life applications of concepts		
Strongly Disagree	0	0
Disagree	1	5
Neutral	5	25
Agree	12	60
Strongly Agree	2	10
Evaluation and examination methods are fair and transparent		
Strongly Disagree	0	0
Disagree	1	5
Neutral	6	30
Agree	7	35
Strongly Agree	6	30
The classrooms are well-maintained and conducive to learning		
Excellent	2	10
Good	2	10
Average	5	25
Poor	8	40
Very Poor	3	15
Laboratory facilities are sufficient and useful for practical learning		
Excellent	3	15
Good	10	50
Average	5	25
Poor	2	10
Very Poor	0	0
The department library/reading resources are adequate and accessible		
Excellent	6	30
Good	7	35
Average	5	25
Poor	2	10
Very Poor	0	0
Internet, computer labs, and digital learning resources meet academic needs		
Excellent	7	35
Good	5	25
Average	6	30
Poor	2	10
Very Poor	0	0
Department facilities are available and accessible when students need the		
Strongly Disagree	0	0
Disagree	0	0
Neutral	6	30
Agree	9	45
Strongly Agree	5	25
The department provides opportunities for skill development through workshops/seminars		
Strongly Disagree	0	0
Disagree	0	0
Neutral	8	40
Agree	9	45
Strongly Agree	3	15
Opportunities for extracurricular and co-curricular activities are adequate		
Strongly Disagree	1	5
Disagree	1	5
Neutral	8	40
Agree	7	35
Strongly Agree	3	15
The department encourages innovation, research, and creative projects		
Strongly Disagree	0	0
Disagree	0	0
Neutral	7	35
Agree	10	50
Strongly Agree	3	15

table Cont....

Questions	No. of Respondents	Percentage of responses (%)
Career guidance and placement support provided by the department are effective		
Excellent	2	10
Good	7	35
Average	6	30
Poor	5	25
Very Poor	0	0
The department maintains a positive and motivating academic environment		
Strongly Disagree	0	0
Disagree	2	10
Neutral	3	15
Agree	13	65
Strongly Agree	2	10
Communication between students and the department is clear and timely		
Strongly Disagree	0	0
Disagree	0	0
Neutral	3	15
Agree	13	65
Strongly Agree	4	20
The department encourages equal participation and inclusiveness among students		
Strongly Disagree	0	0
Disagree	1	5
Neutral	3	15
Agree	11	55
Strongly Agree	5	25
Overall, how would you rate your learning experience in the department?		
Excellent	5	25%
Good	10	50%
Average	4	20%
Poor	1	5%
Very Poor	0	0

RESULT AND DISCUSSION

Section A: Academics

The findings related to academic aspects indicate a generally positive perception among students. A majority of respondents (70%) either agreed or strongly agreed that the curriculum of the department is relevant to current industry or field requirements, while only 15% expressed disagreement and 15% remained neutral. Similarly, regarding the balance between theory and practical learning, 70% of students showed agreement, although 20% expressed neutrality, indicating scope for further improvement in practical exposure.

With respect to exposure to real-life applications of concepts, a substantial proportion of respondents (70%) expressed agreement, while 25% were neutral. This suggests that although practical exposure is satisfactory, some students feel the need for enhanced real-world application. In terms of evaluation and examination methods, 65% of the students perceived the system as fair and transparent, whereas 30% remained neutral, reflecting moderate satisfaction with assessment practices.

Section B: Infrastructure and Resources

The results related to infrastructure and resources present a mixed response. Classroom facilities received relatively lower ratings, with 55% of respondents rating them as poor or very poor, indicating dissatisfaction with classroom maintenance and learning environment. In contrast, laboratory facilities were viewed more positively, with 65% of students rating them as excellent or good, suggesting adequacy in practical learning resources.

Library and reading resources were perceived as satisfactory by a majority of respondents, with 65% rating them as excellent or good. Similarly, digital resources such as internet facilities and computer labs received favorable responses from 60% of students, though 30% rated them as average, indicating a need for further enhancement. Additionally, 70% of respondents agreed or strongly agreed that departmental facilities are available and accessible when required.

Section C: Student Support and Development

The analysis of student support and development reveals a moderately positive perception. A majority of respondents (60%) agreed that the department provides opportunities for skill development through workshops and seminars, while 40% remained neutral. Opportunities for extracurricular and co-curricular activities were also viewed positively by 50% of the respondents, although a significant proportion (40%) expressed neutrality.

Furthermore, the department's encouragement of innovation, research, and creative projects was positively acknowledged by 65% of students. However, perceptions regarding

career guidance and placement support were comparatively less favorable, with only 45% rating them as excellent or good, while 25% rated them as poor, highlighting an area requiring focused improvement.

Section D: Environment and Overall Experience

The findings related to departmental environment indicate a highly positive academic atmosphere. A large majority of respondents (75%) agreed or strongly agreed that the department maintains a positive and motivating academic environment. Communication between students and the department was also rated positively by 85% of respondents, indicating clarity and timeliness in communication practices.

Regarding inclusiveness and equal participation, 80% of students expressed agreement, reflecting a supportive and inclusive departmental culture. Overall learning experience was rated as good to excellent by 75% of respondents, while only 5% rated it as poor. This suggests that, despite certain infrastructural and career support limitations, students generally perceive their learning experience in the department positively.

CONCLUSION

The findings indicate that students at GBPUAT have **a favourable perception** of their academic departments, particularly appreciating curriculum relevance, teaching quality, fairness in evaluation, and a positive academic culture. The university demonstrates strong performance in fostering a supportive learning environment and encouraging student participation and inclusivity.

However, certain areas require attention, especially **classroom infrastructure, career support, and extracurricular opportunities.** Improving these aspects would enhance overall student satisfaction and contribute to a more holistic learning experience.

In summary, while the university successfully delivers a solid academic foundation and positive student experience, strategic improvements in infrastructure and career development services can further strengthen the institution's quality and student outcomes.

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ORIGINAL ARTICLE

Economic Feasibility of Dual-Axis tracking Fresnel Lens-assisted Solar Dryer Integrated with Nano-Enhanced Phase Change Material (NEPCM) Thermal Storage System

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ABSTRACT

Background: Traditional solar dryers suffer from inconsistent solar availability and low energy density, which limit their efficiency and reliability. Rural agro-processing units require sustainable, low-cost, and energy-efficient drying methods to reduce post-harvest losses and dependency on fossil fuels.

Aims: To evaluate the technical and economic feasibility of a dual-axis tracking Fresnel lens solar dryer integrated with nano-enhanced phase change material (NEPCM) thermal storage for agricultural applications.

Material and Methods: A techno-economic model was developed using five years of meteorological data for Indian climatic conditions. The system comprised a dual-axis Fresnel lens concentrator, drying chamber, and NEPCM thermal storage unit based on paraffin wax enhanced with graphene nanoplatelets. Economic evaluation included Net Present Value (NPV), Internal Rate of Return (IRR), payback period, and Levelized Cost of Drying (LCOD).

Results: The integrated system achieved a thermal efficiency of 62%, reducing drying time for crops (chili, turmeric, amla) by 25–35% compared to conventional dryers. NEPCM storage enabled 4.2 hours of extended drying after sunset. The payback period was 4.1 years, with an IRR of 21.4% and LCOD of Rs. 3.2/kg, representing ~60% savings compared to electric dryers. Sensitivity analysis highlighted the influence of PCM cost and solar irradiance on economic viability.

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