

SATISFACTION OF UG AND PG STUDENTS TOWARDS E-LEARNING PLATFORMS IN AN AGRICULTURAL UNIVERSITY

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ABSTRACT

e-learning has emerged as an important mode of education by providing flexible, accessible, and technology-driven learning opportunities. The present study was conducted to assess the satisfaction level of undergraduate (UG) and postgraduate (PG) students regarding the e-learning platform in Sri Karan Narendra Agriculture University, Jobner. The university was purposively selected due to the presence of the highest number of constituent colleges in Rajasthan. From SKN College of Agriculture, Jobner, a total of 120 students (60 UG and 60 PG) were selected using simple random sampling. The findings revealed that the majority of UG (66.67%) and PG (61.67%) students had a medium level of satisfaction with the e-learning platform. In terms of instructional aspects, PG students showed higher satisfaction, particularly in teaching methods and communication techniques, while UG students reported comparatively lower satisfaction regarding teaching style. With respect to technology, PG students expressed higher confidence and comfort in using e-learning platforms, whereas both UG and PG students reported dissatisfaction due to internet interruptions. A significant positive correlation was observed between the satisfaction levels of UG and PG students, indicating similar trends across both groups. The results suggest that although e-learning platforms are generally accepted, improvements are required in instructional delivery and technological infrastructure. These findings align with earlier studies indicating the growing importance of digital learning environments. The study implies that strengthening digital infrastructure, enhancing teacher training in online pedagogy, and addressing connectivity issues can improve student satisfaction and learning outcomes. It also highlights the need for targeted strategies to support UG students in adapting to e-learning systems.

Keywords: *e-learning, student satisfaction, higher education, digital learning, agricultural university*

INTRODUCTION

Information and Communication Technologies (ICTs) have emerged as powerful tools in transforming the educational landscape by facilitating efficient communication, knowledge dissemination, and access to information. The integration of ICT in education has led to the rapid expansion of e-learning systems, which enable students to access educational content anytime and anywhere. E-learning, defined as the use of internet-based technologies for delivering instructional content (Rosenberg, 2001; Jagadeeswari *et al.*, 2019; Darji *et al.*, 2017), promotes a learner-centered approach that supports self-paced and interactive learning environments (Khan, 2001). In recent years, the widespread availability of digital technologies and increasing internet penetration have significantly accelerated the adoption of e-learning platforms across the globe.

According to DataReportal (2025), the number of global internet users has reached approximately 5.65 billion, reflecting a continuous rise in digital connectivity. In India, the growth of internet subscribers has also been remarkable,

increasing from 954.4 million in 2024 to 969.1 million in 2025 (Telecom Regulatory Authority of India, 2025). This rapid expansion of digital infrastructure has created new opportunities for higher education institutions to integrate e-learning into their teaching-learning processes. E-learning platforms offer several advantages, including flexibility in time and place, cost-effectiveness, access to diverse learning resources, and opportunities for enhancing students' technical competencies and independent learning skills.

Despite these advantages, the effectiveness of e-learning is influenced by multiple factors such as internet connectivity, digital literacy, quality of instructional content, and teaching effectiveness. Student satisfaction has been widely recognized as a key indicator in evaluating the success and acceptance of e-learning systems (Buzzetto-More, 2008; Khan *et al.*, 2021; Vegad *et al.*, 2021; Shukla *et al.*, 2022). In the context of agricultural education, the role of e-learning becomes more complex due to the practical and field-oriented nature of the discipline. Agricultural students require hands-on experience, field exposure, and real-time demonstrations,

which are often difficult to replicate through purely online platforms.

Studies in agricultural extension education have indicated that e-learning platforms play an important role in improving access to educational resources, communication, and flexibility in learning among students (Patel and Joshi, 2021). However, several challenges such as poor internet connectivity, limited digital skills, inadequate interaction between teachers and students, and lack of practical exposure continue to affect the effectiveness of online education (Chaudhary et al., 2020). Research has further highlighted that students' digital literacy, institutional support, and availability of technological infrastructure significantly influence their perception and adoption of e-learning systems (Meena and Sharma, 2022; Singh et al., 2021). In addition, blended learning approaches that integrate both online and conventional classroom teaching have been recognized as effective methods for enhancing student participation, learning efficiency, and overall satisfaction in agricultural education (Patel et al., 2023). However, most of the existing studies have primarily focused on general higher education or specific regions, with limited attention to agricultural universities in Rajasthan. In particular, there is a lack of empirical evidence regarding the satisfaction level of undergraduate (UG) and postgraduate (PG) students towards e-learning platforms in institutions like Sri Karan Narendra College of Agriculture, Jobner. Understanding students' satisfaction is essential for identifying gaps in the current e-learning system and for developing effective strategies to enhance the quality of digital education.

Therefore, the present study was undertaken to assess the satisfaction level of UG and PG students regarding e-learning platforms and to identify the key factors influencing their satisfaction, with a view to suggesting improvements in the existing digital learning environment.

Table 1 : Distribution of UG and PG students of SKNCOA according to their satisfaction levels regarding e-learning platforms (n=120)

S. No.	Satisfaction level	UG (n ₁ =60)		Satisfaction level	PG (n ₂ =60)	
		f	%		f	%
1	Low (Less than 68.37 score)	11	18.33	Low (Less than 82.14 score)	22	36.67
2	Medium (From 68.37 to 98.27 score)	40	66.67	Medium (From 82.14 to 101.36 score)	37	61.67
3	High (More than 98.27 score)	9	15.00	High (More than 101.36 score)	1	1.66

Mean= 83.32 SD= 14.95

Mean= 91.75 SD= 9.61

Distribution of UG and PG students of SKNCOA according to their satisfaction levels regarding e-learning platforms

Table 2 and fig 1 shows that majority of UG students 40 (66.67%) were having a medium level of satisfaction,

METHODOLOGY

The present study was conducted at Sri Karan Narendra Agriculture University, Jobner, Rajasthan, which was purposively selected due to having the highest number of constituent colleges in the state. Among the 14 constituent colleges, SKN College of Agriculture, Jobner was selected because of its comparatively better infrastructure and availability of e-learning facilities.

The study followed a descriptive research design. A list of undergraduate and postgraduate students was obtained from the Dean's office of the college. From this list, 60 UG and 60 PG students were selected using simple random sampling, making a total sample size of 120 respondents.

Data were collected using a structured interview schedule designed to measure students' satisfaction levels across different dimensions, including instructors and technology. The responses were quantified using Mean Percent Score (MPS) and categorized into low, medium, and high levels based on mean and standard deviation. Statistical tools such as rank correlation and Z-test were used to analyze relationships and differences between UG and PG students. These tools were applied to understand the degree of association and significance of differences in satisfaction levels between the two groups.

RESULTS AND DISCUSSION

Satisfaction levels of UG and PG students regarding e-learning platform

The satisfaction level of UG and PG students of SKNCOA regarding e-learning platform was assessed by categorizing them into three groups i.e., low, medium and high based on the mean and standard deviation of their satisfaction scores. The assessment included both UG and PG students.

followed by 11 (18.33%) with a low level of satisfaction and 9 (15.00%) with a high level of satisfaction regarding e-learning platform.

Table 1 and fig 1 shows that majority of PG students 37 (61.67%) were having a medium level of satisfaction

followed by 22 (36.67%) with a low level of satisfaction and 1 (1.66%) with a high level of satisfaction regarding

e-learning platform. These findings are consistent with those reported by Khan et al. (2021) and Jain (2022).

Table 2. Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their instructors (n=120)

Sr. No.	Statements	UG (n ₁ =60)		PG (n ₂ =60)	
		MPS	Rank	MPS	Rank
1	I like the way my instructor makes students feel a sense of belongings	76.67	1	85.33	2
2	I feel the instructor's organization and preparation for class provides comfortable learning environment	71.00	3	83.00	3
3	I like the instructor's teaching ability with the use of various communication techniques	72.00	2	86.33	1
4	I like when instructor emphasizes in maintaining the distraction free classes	70.67	4	80.67	4
5	I don't like the instructor's teaching style	46.00	5	22.00	5
	Overall	67.27		71.47	

r_s = Rank correlation

* Significant at 5% level of significance

r_s = 0.90*

t=3.58

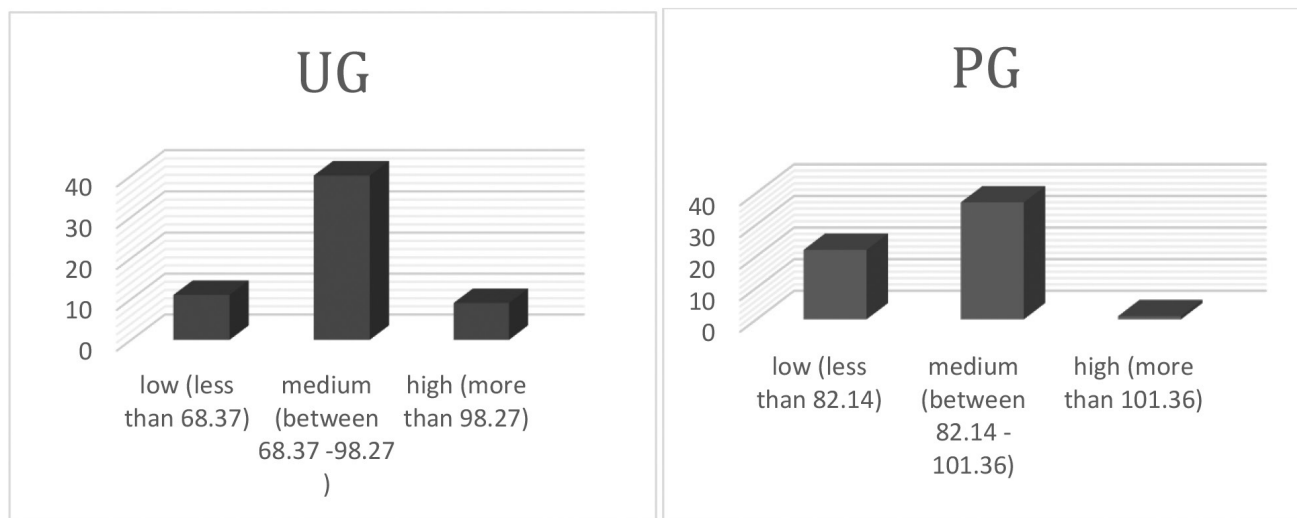


Fig 1. Distribution of UG and PG students of SKNCOA according to their satisfaction level

Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their instructors

As presented in Table 2 and fig 2, the data in instructors category indicate among UG students, the highest satisfaction was observed of “I like the way my instructor makes students feel a sense of belongings”, with an MPS of 76.67, which was consequently ranked first. The second-highest MPS among PG students was observed for “I like the instructor’s teaching ability with the use of various communication techniques”, with a score of 72.00, and the lowest satisfaction was observed of “I don’t like the

instructor’s teaching style” (46.00 MPS).

Table 2 and fig 2 also revealed that the data in instructor’s category indicate that among PG students, the highest satisfaction was observed of “I like the instructor’s teaching ability with the use of various communication techniques”, with an MPS of 86.33, which was consequently ranked first. The second-highest MPS among PG students was observed for “I like the way my instructor makes students feel a sense of belongings”, with a score of 85.33, and the lowest satisfaction was observed of “I don’t like the instructor’s teaching style” (22.00 MPS).

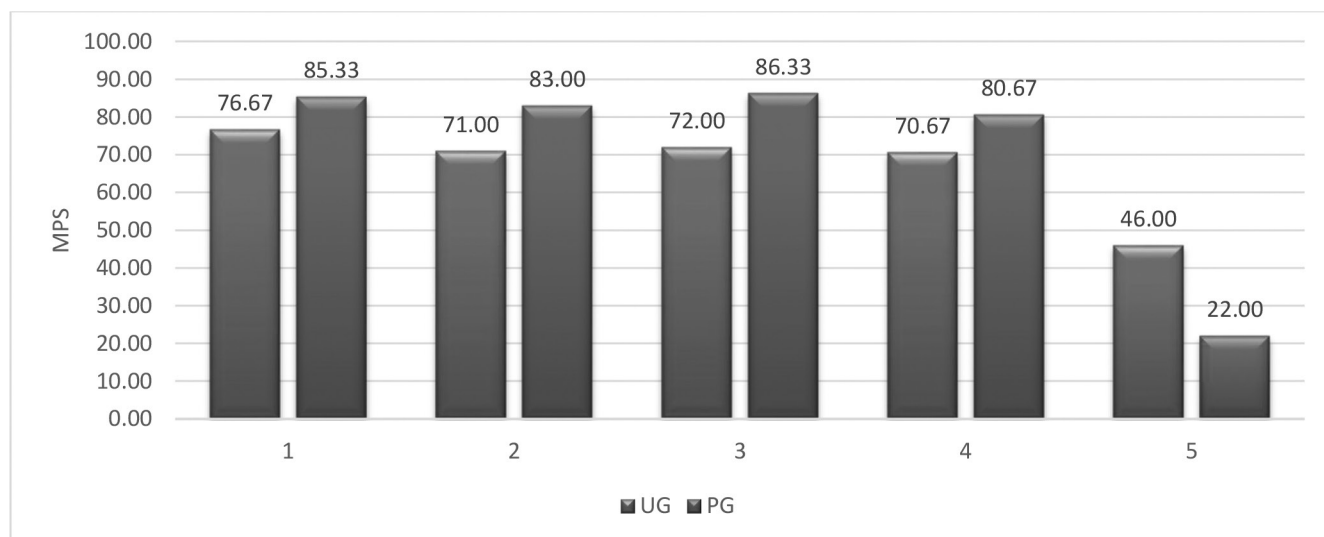


Fig 2. Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their instructors

An effort was also made to find out the rank order correlation between satisfaction level of UG and PG students regarding e-learning platform. The value of rank order correlation (r_s) was 0.90 which shows positive correlation between UG students satisfaction level and PG students satisfaction level, the significance of r_s was tested by 't' test and it was observed that 't' calculated value (3.58) was higher than its table value. This leads to conclusion that there is correlation in ranking of satisfaction of UG and PG students with regarding to e-learning platform. Though there is significant correlation between ranking of UG and PG students because of similar trends of satisfaction level between UG and PG students. The results are in confirmation with the findings of Buzzetto-More (2008).

Comparison of satisfaction levels of UG and PG students of SKNCOA regarding the e-learning platforms with respect to their instructors

The data related to satisfaction level of UG and PG students incorporated in table 3 shows that calculated 'Z' value was higher than the tabulated value at 1 per cent level of significance in statements of "I feel the instructor's organization and preparation for class provides comfortable learning environment", "I like the instructor's teaching ability with the use of various communication techniques", "I don't like the instructor's teaching style", and calculated 'Z' value was higher than the tabulated value at 5 per cent level of significance in statements of "I like the way my instructor makes students feel a sense of belongings", "I like when instructor emphasizes in maintaining the distraction free classes".

Table 3 : Comparison of satisfaction levels of UG and PG students of SKNCOA regarding the e-learning platforms with respect to their instructors (n=120)

Sr. No.	Statements	UG (n ₁ =60)		PG (n ₂ =60)		Z value
		Mean	SD	Mean	SD	
A	Instructors					
1	I like the way my instructor makes students feel a sense of belongings	3.83	1.36	4.27	1.01	1.99*
2	I feel the instructor's organization and preparation for class provides comfortable learning environment	3.55	1.32	4.15	1.02	2.78**
3	I like the instructor's teaching ability with the use of various communication techniques	3.60	1.22	4.32	1.05	3.44**
4	I like when instructor emphasizes in maintaining the distraction free classes	3.53	1.23	4.03	1.02	2.42*
5	I don't like the instructor's teaching style	2.30	1.60	1.10	0.30	5.72**

* Significant at 5% level of significance

** Significant at 1% level of significance

Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their technology

As presented in Table 4 and fig 3, the data in technology category indicate among UG students, the highest satisfaction was observed of “I am satisfied with the e-learning platform as it is easy to operate”, with an MPS of 79.67, which was

consequently ranked first. The second-highest MPS among UG students was observed for “I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed”, with a score of 77.67, and the lowest satisfaction was observed of “I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process” (47.33 MPS).

Table 4: Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their technology (n=120)

Sr. No.	Statements	UG (n ₁ =60)		PG (n ₂ =60)	
		MPS	Rank	MPS	Rank
B	Technology				
1	I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed	77.67	2	87.67	1
2	I feel confident that classes will not be cancelled due to weather	69.67	5	80.00	5
3	I feel that the response time of teachers is faster in online courses	75.00	4	84.00	4
4	I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process	47.33	6	33.33	6
5	I am satisfied with the e-learning platform as it is easy to operate	79.67	1	87.00	2
6	I feel comfortable in using different e-learning platforms	76.33	3	84.67	3
	Overall	70.94		76.11	

r_s = Rank correlation

* Significant at 5% level of significance

r_s = 0.94*

t = 5.65

As presented in Table 4 and fig 3, the data in technology category indicate that among PG students, the highest satisfaction was observed of “I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed”, with an MPS of 87.67, which was consequently ranked first. The second-highest MPS among PG students

was observed for “I am satisfied with the e-learning platform as it is easy to operate”, with a score of 87.00, and the lowest satisfaction was observed of “I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process” (33.33 MPS).

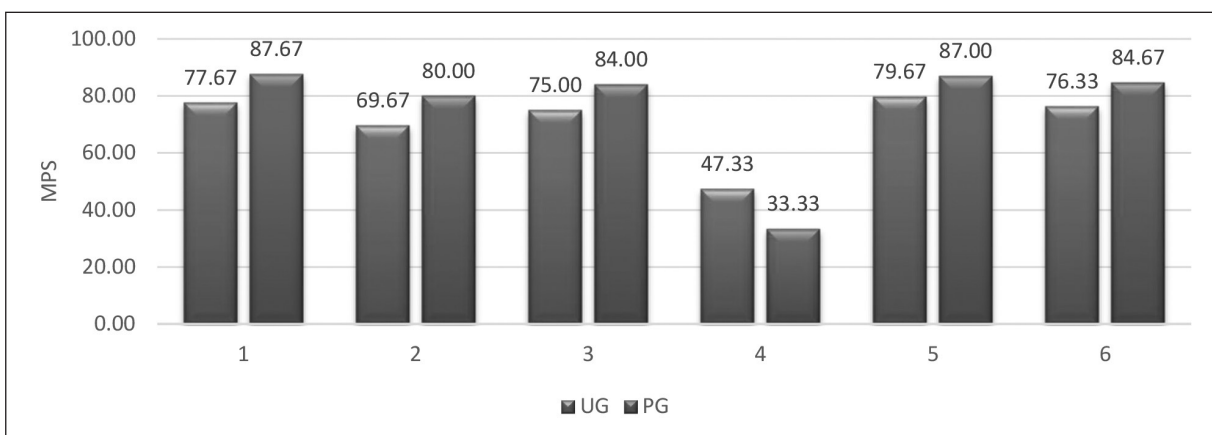


Fig 3 : Satisfaction level of UG and PG students of SKNCOA regarding the e-learning platform with respect to their technology

An effort was also made to find out the rank order correlation between satisfaction level of UG and PG students regarding e-learning platform. The value of rank order

correlation (r_s) was 0.94 which shows positive correlation between UG students satisfaction level and PG students satisfaction level, the significance of r_s was tested by ‘t’

test and it was observed that 't' calculated value (5.65) was higher than its table value. This leads to conclusion that there is correlation in ranking of satisfaction of UG and PG students with regarding to e-learning platform. Though there is significant correlation between ranking of UG and PG students because of similar trends of satisfaction level between UG and PG students.

The results are in confirmation with the findings of Buzzetto-More (2008); Vaishnavi *et al.* (2025); Rathod *et al.* (2025); Rajendran *et al.* (2025); Kumar & Thakkar, (2024); Danu *et al.* (2024); Jagadeeswari *et al.* (2019); Darji *et al.* (2017); Vegad *et al.* (2021); Shukla *et al.* (2022).

Comparison of satisfaction levels of UG and PG students of SKNCOA regarding the e-learning platforms with

respect to their technology

The data related to satisfaction level of UG and PG students incorporated in table 5 shows that shows that calculated 'Z' value was higher than the tabulated value at 1 per cent level of significance in statements of "I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed", "I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process", and calculated 'Z' value was higher than the tabulated value at 5 per cent level of significance in statements of "I feel confident that classes will not be cancelled due to weather", "I feel that the response time of teachers is faster in online courses", "I am satisfied with the e-learning platform as it is easy to operate", "I feel comfortable in using different e-learning platforms".

Table 5. Comparison of satisfaction levels of UG and PG students of SKNCOA regarding the e-learning platforms with respect to their technology (n=120)

Sr. No.	Statements	UG (n ₁ =60)		PG (n ₂ =60)		Z value
		Mean	SD	Mean	SD	
B	Technology					
1	I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed	3.88	1.08	4.38	0.87	2.81**
2	I feel confident that classes will not be cancelled due to weather	3.48	1.32	4.00	1.31	2.15*
3	I feel that the response time of teachers is faster in online courses	3.75	1.22	4.20	0.88	2.32*
4	I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process	2.37	1.47	1.67	1.11	2.94**
5	I am satisfied with the e-learning platform as it is easy to operate	3.98	1.13	4.35	0.68	2.15*
6	I feel comfortable in using different e-learning platforms	3.82	1.26	4.23	0.83	2.14*

* Significant at 5% level of significance

** Significant at 1% level of significance

- (1) PG students have high level of satisfaction on statement "I am satisfied with the quality of graphic aids such as sound and picture (PPT) being displayed" and UG students have high level of satisfaction on statement "I am satisfied with the e-learning platform as it is easy to operate". Both UG and PG students have low level of perception on statement "I feel sudden interruption in delivering the information due to technological error (internet) hinders the learning process".
- (2) A positive rank order correlation was observed between the satisfaction level of UG and PG students regarding the various statements of e-learning platform, indicating a similar trend in relative satisfaction across statements.
- (3) Statistically significant differences were found between UG and PG students, both statement wise and in terms of overall satisfaction. PG students consistently showed

higher levels of satisfaction as compare to UG students.

CONCLUSION

The study revealed that the majority of UG and PG students had a medium level of satisfaction with e-learning platforms, indicating moderate acceptance of digital learning. PG students were relatively more satisfied than UG students in terms of instructional methods, communication, and technological aspects. However, poor internet connectivity emerged as a major constraint affecting both groups. The findings suggest the need to strengthen digital infrastructure, improve online teaching competencies of instructors, and provide additional support to UG students for better adaptation to e-learning systems. Overall, continuous efforts are required to enhance the effectiveness and acceptance of e-learning in agricultural education.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are suggested:

- (1) Efforts should be made to strengthen digital infrastructure, particularly improving internet connectivity to ensure uninterrupted e-learning experiences for students.
- (2) Training programmes should be organized for faculty members to enhance their skills in online teaching methodologies and effective use of digital tools.
- (3) Institutions should develop user-friendly and interactive e-learning content to increase student engagement and satisfaction.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

REFERENCES

- Buzzetto-More, N. A. (2008). Student perceptions of various e-learning components. *Interdisciplinary Journal of E-Learning and Learning Objects*, 4(1), 113–135.
- Chaudhary, R., Meena, S., and Patel, D. (2020). Constraints faced by agricultural students in online learning during COVID-19 pandemic. *Gujarat Journal of Extension Education*, 31(2), 85–89.
- Danu, Nikita and Gupta, Ritu Mittal (2024) Oral communication apprehension among postgraduate students. *Gujarat Journal of Extension Education*, 37(2):47-52. <https://doi.org/10.56572/gjoe.2024.37.2.0009>.
- Darji, A.R., Panchasara, B.R. and Vinaya Kumar H.M. (2017). Determinates of attitude of postgraduate research scholars towards the use of computer for their empowerment. *Guj. J. Ext. Edu.* 28 (2): 277-281
- DataReportal. (2025). Digital 2025 global overview report. Retrieved from <https://datareportal.com>
- Jagadeeswari, B., Vinaya Kumar H. M., and Patel, J. B. (2019). Attitude of postgraduate students towards research, *Gujarat Journal Extension Education*, 30(1), 87-89.
- Jain, S. (2022). Opinion of students about online classes and examination during COVID-19. *Gujarat Journal of Extension Education*, 33(2), 45–48.
- Khan, B. H. (2001). A framework for web-based learning. Educational Technology Publications.
- Khan, M. A., Vivek, Nabi, M. K., Khojah, M., and Tahir, M. (2021). Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. *Sustainability*, 13(1), 57. <https://doi.org/10.3390/su13010057>
- Kumar, A. and Thakkar, M. G. (2024) Perception about entrepreneurship among the post graduate students of state agricultural universities. *Gujarat Journal of Extension Education*, 38(1):130-135. <https://doi.org/10.56572/gjoe.2024.38.1.0022>.
- Meena, R. K., and Sharma, L. (2022). Digital literacy and perception of students towards e-learning platforms in agricultural education. *Gujarat Journal of Extension Education*, 33(1), 112–116.
- Patel, H., and Joshi, V. (2021). Role of e-learning platforms in agricultural higher education. *Gujarat Journal of Extension Education*, 32(1), 54–58.
- Patel, P., Singh, A., and Kumar, R. (2023). Effectiveness of blended learning approach in agricultural education. *Gujarat Journal of Extension Education*, 34(2), 97–102.
- Rajendran, N., Saini, H. and Lekha, U. S. S. (2025) Attitude of agriculture graduate students towards higher studies in abroad. *Gujarat Journal of Extension Education*, 39(2): 99–102. <https://doi.org/10.56572/gjoe.2025.39.2.0017>
- Rathod, L. S., Patel, V. M. and Patel, J. K. (2025) Entrepreneurial attitude of undergraduate agriculture students. *Gujarat Journal of Extension Education*, 39(2): 65–69. <https://doi.org/10.56572/gjoe.2025.39.2.0011>
- Rosenberg, M. J. (2001). E-learning: Strategies for delivering knowledge in the digital age. McGraw-Hill.

- Shukla, Y. M., Patel, J. B., Hemlata Saini and Vinaya Kumar, H. M. (2022). Student READY achievements. Asian Printery, Gujarat, India. Publication Number: EDU-1-55:2022:100
- Singh, M., Kaur, R., and Verma, P. (2021). Institutional support and students' satisfaction towards online learning in agricultural universities. *Gujarat Journal of Extension Education*, 32(2), 140–145.
- Telecom Regulatory Authority of India (TRAI). (2025). The Indian telecom services performance indicators. Retrieved from <https://www.trai.gov.in>
- Vaishnavi, P., Nithya Shree, D. A. and Halakatti, S. V. (2025) Perception of agriculture graduates towards student READY programme. *Gujarat Journal of Extension Education*, 40(1): 11–17. <https://doi.org/10.56572/gjoe.2025.40.1.0002>
- Vegad, N. M., Chauhan N. B. and Vinaya Kumar H. M. (2021). Factors affecting knowledge about e-extension amongst the postgraduate scholars of agricultural extension and communication. *Guj. J. Ext. Edu.* 32 (2): 81-84.

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