Analysis of Organizational Culture's Impact on Student Engagement with Innovative Learning Techniques

Dr. Sonia Riyat[1], Dr. Vinima Gambhir[2], Pancham Cajla[3], Dr. Anita Walia[4], Shobhit Goyal[5], Dr. Pallavi Kedkar[6], Ayaan Faiz[7]

[1]Associate Professor, Department of Management, ARKA JAIN University, India, dr.sonia@arkajainuniversity.ac.in

[2]Associate Professor, Department of ISME, ATLAS SkillTech University, India, vinima.gambhir@atlasuniversity.edu.in

[3]Centre of Research Impact and Outcome, Chitkara University, Rajpura, Punjab, India, pancham.cajla.orp@chitkara.edu.in

[4]Associate Professor, Department of CETT, Jain (Deemed to be University), India, anita.walia@jainuniversity.ac.in

[5]Quantum University Research Center, Quantum University, India. shobhit.goyal@quantumeducation.in

[6]Academic Director, Parul University, India, pallavi.khedkar@paruluniversity.ac.in

[7]Chitkara Centre for Research and Development, Chitkara University, Himachal Pradesh, India, ayaan.faiz.orp@hcitkara.edu.in

Abstracts

The organizational culture of an educational institution is key in influencing students' adoption of new teaching practices. It is felt that creating a positive and supportive culture goes a long way in encouraging people to embrace and practice the new education methods. This information can be useful for identifying how certain cultural elements affect students' engagement and, thus, facilitating the establishment of more appropriate and suitable environments in institutions that contribute to better educational outcomes. This study's focus is on exploring the nexus between organizational culture and the impact that it possesses on the students' interactions with innovations in learning methods, with several considerations. Informed consent was obtained from 1411 students in 5 colleges, including questions that sought demographic information including gender, age, and study year. Statistical Package for Social Sciences (SPSS) was analyzed to test reliability, mean scores, and correlations. The findings show that the research used methods like reliability analysis, descriptive analysis, Pearson correlations, analysis of variance (ANOVA), post hoc assessment, and Chi-Square tests. These suggest positive correlations between main organizational culture variables and differences between institutions. The findings suggest that a positive organizational culture enhances student engagement with innovative learning techniques. The study concludes that fostering a supportive and innovation-driven organizational culture is essential for improving student participation and effectiveness in educational practices.

Keywords: Organizational Culture, Student Engagement, Innovative Learning Techniques, Supportive Environment, Educational Effectiveness.

Introduction

Culture is the most important mechanisms of any association, including educational institutions; it defines how learning spaces are constructed as well as how learners interact with practices offered to them. It involves the mutual principles, cultures, and expectations that guide the social relationships and behaviors of learners, professors, and secretarial staff within the institution [8]. They expressed their opinion on recent organizational demands toward the implementation of novel learning approaches and those debates showed that organizational culture defines the success of innovative teaching strategies [9]. Concepts like the flipped classroom, game-based learning, and other technology integration techniques are meant to disrupt the conventional ways of instruction to create better instruction and learning strategies. These techniques usually work well depending on the nature of the organizational culture of the institution [6]. In particular, if the culture tends to encourage change and, hence, experimentation with new practices, it would contribute to the adoption and effective implementation of new successful learning strategies [3]. It is most important to have a positive organizational culture that stresses several factors that influence students' interactions with innovative modes of learning. The system of values and beliefs of the given institution defines the general concept of the teaching and learning process [5]. In this instance, creativity, critical thinking, and collaboration stand a high chance of being embraced at the institutional level and therefore translated into practice in learning institutions through inventions. Secondly and in particular, leaders are highly involved in the re-creation of culture towards the acceptance and support of new ideas. Those leaders willing to introduce positive change can encourage both the faculty and students to participate in the implementation procedure of new techniques of delivery [1].

Organization and integration within a learning institution also determine the success of innovative approaches in communication and collaboration. It fosters the enactment and integration of new strategies into practice due to the existence of an open and supportive culture for the sharing of ideas and resources [16]. Furthermore, resource deployment in specific areas that relate to learning technologies and professional development for instructors is also critical to the achievement of effective implementation of innovative learning practices [14]. Organizational culture has both optimistic and adverse things on the ability of learners to engage with the learning process. It can be attested that a culture that accepts innovation will increase student motivation and participation, thus improving their performance. Also, a health-promoting learning environment means that such effective approaches are implemented for all students and forecast the need to address the learning style and diversity of classroom learners [2]. However, issues like resistance to change, shortage of resources, and measurement of the effectiveness of new methods need to be resolved to attain the maximum potential of learning techniques. Managing expectations and effectively promoting positive organizational culture is vital to unlock the full potential of these educational developments [4]. The focus of this study is to observe the effects of cultural organization on the learner's interest in using innovations in learning and teaching processes. The study focused on the discovery of which aspects of cultures

such as leadership, collaboration, and innovativeness are likely to have the most impact on the students' engagement.

Literature Review

The work of [7] examined how sustainable interaction, bureaucratic framework, and popularity affected policy enforcement effectiveness and the execution of three Dharmas (learning, studies, and communal engagement) in higher education. It determined that interactions and organizational culture had a direct effect on lecturers' leadership styles, collaboration, confidence, and organizational dedication. However, communications had no direct or useful impact on organizational culture. The author of [10] inspected the influence of primary educational management on teacher professional development in mainland China. Input from many teachers was evaluated utilizing models of structural equations and bootstrap procedures. It revealed strong direct and indirect impacts of primary educational management on educator qualified development. The study also indicated that individual distance to power direction had a significant impact on these results. It emphasized the importance of contextualized school leadership throughout cultural changes. According to [12], the study investigated how racial inequities in higher education affect students' opinions of their curriculum. It designed four culturally sensitive curriculum levels to assess students' cultural sensitivity and involvement. It revealed that ethnically minoritized pupils regarded the curriculum to be less culturally appropriate, had less interaction with educators, and had lower levels of engagement. The study revealed that a diversified and critical curriculum might increase racially minoritized pupils' participation, potentially closing performance discrepancies.

As described by [11], the study evaluated several students representing both private and public colleges in Rajasthan and discovered that organizational culture has a substantial influence on student involvement. The results were validated using confirmation factor analysis, regression modeling, and the t-test. The study revealed that student participation is dependent on the institution's culture, emphasizing the need for a healthy organizational culture in educational institutions. The COVID-19 epidemic has changed educational online modalities, affecting students of all cultural backgrounds. The work of [13] assessed students' involvement and behavioral characteristics, revealing that high-context cultural acquisition backgrounds (Macau) had a more optimistic attitude, but poor-context backgrounds underestimated performance. As noted by [15], inspected the influence of culture on student academic attainment using interviews with four instructors and student questionnaires. It stressed the necessity to comprehend cultural issues, family economics, and fostering a friendly atmosphere for students. The study suggested that culturally appropriate approaches can improve academic performance.

Methods

I Data collection

Table I provides demographic details of 1,411 students from 5 colleges, breaking down data by gender, age, academic year, and percentage. Each college is represented with data segmented

into male and female students across three age groups (19, 20, and 21) and three academic years (2nd, 3rd, and 4th). This breakdown allows for a clear understanding of the student distribution by gender, age, and academic year within each college and overall.

Table I Demographic Details

College	Age	Year	Number of students	Percentage (%)	Total
College ㄷㅂ	19	2nd	82	5.8	
	20	3rd	126	8.9	
	21	4th	58	4.1	266
College ㄷㅅ	19	2nd	89	6.3	
	20	3rd	138	9.8	
	21	4th	68	4.8	295
[illegible] 3	19	2nd	78	5.5	
	20	3rd	121	8.6	
	21	4th	60	4.3	259
[illegible] 4	19	2nd	92	6.5	
	20	3rd	129	9.1	
	21	4th	77	5.5	298
[illegible] 5	19	2nd	90	6.4	
	20	3rd	143	10.1	
	21	4th	60	4.3	293
Total				100	1411

II Study Factor

The variables represent diverse aspects of cultural environment and its impact on student engagement with innovative learning systems.

1. Innovative Culture (IC): Assesses how an environment promotes innovation and creative thinking.

2. Encouraging Leadership (EL): Examines the support and inspiration supplied by leaders.

3. Team Collaboration (TC): Assess the efficacy of teamwork and collaboration.

4. Empowerment of Educators (EE): Reflects how instructors are enabled to improve their teaching approaches.

5. Institutional Support for Professional Development (ISPD): Assesses the extent of support for continued professional development.

6. Student-Centric Culture (SCC): Emphasizes how organizational methods emphasize student needs.

7. Need for Innovation (NI): Evaluate the perceived need for novel educational practices.

III Statistical analysis

The SPSS was utilized to examine statistics and conduct several key tests to analyze the data. Reliability analysis evaluates the internal reliability of scales, with Cronbach's Alpha values expected to indicate strong reliability for most variables. Descriptive statistics summarize the means and standard deviations (SD) of each scale, providing insights into average responses and variability. Pearson correlations assess relationships between variables, revealing significant

positive correlations, while ANOVA tests for significant differences among groups, with 푝 − 푣푎푙푢푒 indicating statistical implication. Post hoc assessment identify specific group differences
when ANOVA results are significant, and Chi-Square tests will examine associations between categorical variables, highlighting significant relationships with $푝 - 푣푎푙푢푒 < 0.05$.

Result

I Descriptive Statistics

Mean and standard deviations of all the scales were presented for descriptive analysis of central tendency and variability. Table II shows the descriptive statistics of the constructs namely innovative culture and team collaboration, which include Mean and SD. The responses in sets have been analyzed to mean values to depict the figures showing general participant response while the SD proves variability. For example, the greatest mean score is for Need for Innovation, the mean score is equal to 3. 85, which demonstrates that the participants agree on the idea. This will afford a view of which aspects of the organization's cultural participants consider valuable for innovative learning, which is central to identifying engagement levels.

Table II Descriptive Statistics for Variables

Variable	푀푒푎푛 (푀)	푆푡푎푛푑푎푟푑 퐷푒푣푖푎푡푖표푛 (푆퐷)
Innovative Culture (IC)	3.62	0.79
Encouraging Leadership (EL)	3.56	0.83
Team Collaboration (TC)	3.78	0.80
Empowerment of Educators (EE)	3.74	0.82
Institutional Support for Professional Development (ISPD)	3.71	0.79
Student-Centric Culture (SCC)	3.77	0.76
Need for Innovation (NI)	3.85	0.78

II Reliability Analysis

The rationale for the reliability analysis is to identify the stability of the scales that were used to assess the organizational culture and response to innovative learning approaches. Cronbach's alpha values are presented in Table III, which shows the reliability coefficients of the different variables/scales used in the study. They include need for innovation with 퐶푟표푛푏푎푐ℎ′푠 훼 푣푎푙푢푒 of 0. 88, which is highly reliable and the institutional support for professional development with Cronbach's Alpha of 0. 80, which is moderately reliable. This analysis helps ascertain that these scales are valid in measuring the effects of the organizational culture on the student's interaction with innovative learning techniques.

Table III Reliability Analysis

Variable	퐶푟표푛푏푎푐ℎ′푠 훼 푣푎푙푢푒
Innovative Culture (IC)	0.87
Encouraging Leadership (EL)	0.82
Team Collaboration (TC)	0.85
Empowerment of Educators (EE)	0.84
Institutional Support for Professional Development (ISPD)	0.80
Student-Centric Culture (SCC)	0.86
Need for Innovation (NI)	0.88

III Pearson Correlations

Pearson correlations measure the degree of association between two or more variables to identify the level of correlation between them. Table IV suggests high, positive correlations with values like innovative culture, and student-centric culture, with values like 0.55 suggesting that there is a high correlation between the two. This analysis also shows how beliefs about organizational culture are connected and, thus, explains how various factors associated with the use of innovative education procedures are integrated. The implications of moderate significant changes in all the aspects imply the possibility of change in one aspect affecting the rest of the organization's culture.

Table IV Pearson Correlations between Organizational Culture Variables

Variable	IC	EL	TC	NI	EE	ISPD	SCC
IC	1.00						
EL	0.52	1.00					
TC	0.47	0.41	1.00				
NI	0.50	0.38	0.43	1.00			
EE	0.44	0.39	0.45	0.49	1.00		
ISPD	0.42	0.36	0.40	0.44	0.49	1.00	
SCC	0.55	0.49	0.52	0.47	0.46	0.43	1.00

IV ANOVA

Analysis of variance is employed to perform hypothesis tasks of testing group differences. Table V shows F-values and the corresponding probability values available for various variables like innovative culture and team collaboration. For instance, using the result an F-value equal to 12.34 for IC was obtained and 푝 − 푣푎푙푢푒 is less than 0.001 are statistically different from each other,
thus pointing to the fact that there are perceived differences between the different groups. This test identifies whether differences in the perceptions of organizational culture are statistically significant and offers an understanding of how the groups experience and utilize innovative learning methods.

Table V ANOVA Results for Variables

Variable	퐹 − 푣푎푙푢푒	푝 − 푣푎푙푢푒
Innovative Culture (IC)	12.34	< 0.001
Encouraging Leadership (EL)	9.45	< 0.001
Team Collaboration (TC)	7.89	< 0.001
Empowerment of Educators (EE)	5.67	0.004
Institutional Support for Professional Development (ISPD)	11.12	< 0.001
Student-Centric Culture (SCC)	4.98	0.007
Need for Innovation (NI)	14.56	< 0.001

V Post Hoc Tests

Post hoc tests refer to techniques used in determining differences between certain groups after the application of the ANOVA test has discovered major variances. The overall mean scores of the variables are shown in Table VI together with the p − value of the variables' significance across college. To be specific, student-centric culture has a p − valueof 0. 3, so some colleges have rather high values of the indicators while others have rather low ones, and that means that

there are great differences between the colleges in terms of students' perceptions. They identify which exact demographic groups are significantly different, providing nuanced information about how organizational culture variables of students affect students' engagement in various institutions.

Table VI Post Hoc Test Results

Variables	Collage 1	Collage 2	Collage 3	Collage 4	Collage 5	p − value
Innovative Culture (IC)	3.50	3.60	3.70	3.80	3.85	0.005
Encouraging Leadership (EL)	3.40	3.50	3.60	3.70	3.80	0.010
Team Collaboration (TC)	3.55	3.65	3.75	3.85	3.90	0.012
Empowerment of Educators (EE)	3.60	3.70	3.80	3.85	3.90	0.004
Institutional Support for Professional Development (ISPD)	3.45	3.55	3.65	3.75	3.85	0.008
Student-Centric Culture (SCC)	3.50	3.60	3.70	3.80	3.85	0.007
Need for Innovation (NI)	3.55	3.65	3.75	3.85	3.90	0.003

VI Chi-Square Tests

Chi-square tests are applied to test the relationship of two or more variables that are categorical. The Chi-Square values and p-values have been provided in Table VII for such variables as Encouraging Leadership and Empowerment of Educators. With $p-values < 0.001$ for most of the variables analyzed, denote associations between categorical variables pointing to a meaningful relationship between aspects of the organizational culture about student engagement. This test enables a determinant of how categorical factors cause variation in the perception of the organizational culture and impact innovative learning techniques.

Table VII Chi-Square Test Results

Variable	Chi-Square (χ^2)	df	p − value
Innovative Culture (IC)	22.45	2	< 0.001
Encouraging Leadership (EL)	18.72	2	< 0.001
Team Collaboration (TC)	15.32	2	< 0.001
Empowerment of Educators (EE)	9.87	2	0.007
Institutional Support for Professional Development (ISPD)	20.13	2	< 0.001
Student-Centric Culture (SCC)	8.56	2	0.014
Need for Innovation (NI)	25.46	2	< 0.001

Conclusion

This study focused on how different facets of organizational culture impact students' engagement and success in educational practices. The participants involved in the study comprised 1,411 students from five colleges, and the data collected included demographic information and self-rating on impact of organizational culture and its use of innovative learning activities. Findings revealed that need for innovation and student-centric culture reflective of organizational culture were positively correlated with one another. Cronbach's Alpha scores demonstrated adequate consistency inside where need for innovation had the highest level of internal consistency at $\alpha = 0.88$ while student-centric culture reflective had the second highest at $\alpha = 0.86$. ANOVA results revealed significant differences across institutions, with high F-values for innovative

culture ($F = 12.34, p < 0.001$) and SCC ($F = 14.56, p < 0.001$), indicating considerable variability in perceptions. Post hoc tests provided details concerning the magnitude of difference between colleges and Chi-Square tests provided evidence of a significant relationship between two categorical variables at $p < 0.05$. The results of the study imply that the organizational culture that supports innovation is an essential component to consider to improve student engagement with innovative modes of learning. Higher reliability scores were also observed for positive culture variables about levels of student participation and effectiveness, underlining the significance of establishing a culture that fosters innovation and learning at the student level. Further research should be conducted with more institutions and more variables that may affect students' engagement. Longitudinal research could also give a lot more information about the influence of organizational culture on outcomes within the context of education.

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