

Original Research Article

Organizational Culture and Learning Organization: An Empirical Study of the Colleges in Bhutan

ABSTRACT

Aims: The study assessed the learning organization (LO) dimensions, dominant culture, and the relationship between the organizational culture and learning organization dimensions of the colleges of Royal University of Bhutan (RUB).

Study design: It was a correlational study.

Place and Duration of Study: The sample consisted of teaching and non-teaching staff of the colleges of RUB. The survey was conducted in Bhutan between February and April 2022.

Methodology: The study participants were 201 teaching (161) and non-teaching (40) staff of the colleges of RUB. The Organizational Culture Assessment Instrument (OCAI) was used to analyze the culture of the colleges. The Dimensions of the Learning Organization Questionnaire (DLOQ) was used to examine the LO characteristics of the colleges. IBM SPSS (Statistical Product and Service Solutions) version 21 was used for data analysis.

Results: RUB can be considered as a learning organization, as the average (4.051) of the DLOQ dimensions' ratings by the staff is higher than the DLOQ scale average. The DLOQ dimension, connect the organization to its external environment, achieved the highest score. The DLOQ dimension, foster inquiry and dialogue, achieved the lowest score. The dominant culture of the colleges of RUB is clan culture. Clan culture significantly positively predicted, and hierarchy culture significantly negatively predicted the dimensions of a learning organization – continuous learning, inquiry and dialogue, team learning, strategic leadership for learning, systems to capture learning, empower people, and connect the organization. These predictors predicted 17.86 percent to 25.72 percent of the variance in the learning organization dimensions.

Conclusion: The dominant culture of the colleges can promote or act as a barrier to the LO practices in the organization. The colleges need to shift orientation from control to collaboration to promote LO characteristics in the colleges.

Keywords: Learning organization; Organizational culture; Bhutan; Higher education; Organizational learning.

1. INTRODUCTION

Organizational learning (OL) was first coined by Cyert and March [1] to describe the adaptive behavior of an organization – learning from experience. An organization which has a greater ability to continuously learn, and change is a learning organization (LO). It has a culture to provide resources for individual learning, facilitates dialogue and inquiry at all levels, gathers suggestions for change, stresses team learning and collaboration between teams, create

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1 systems to record and share learning, empowers people to create a collective vision,
2 establish connections between the organization and its environment, scan the environment
3 to anticipate future needs, and provide leaders and managers who facilitate learning [2].
4 Culture is the most important factor to influence an organization's ability to grow [3]. The
5 shared assumptions (vision, values, history, memory) of an organization is it's culture.

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6 Numerous studies have shown that OL has a significant impact on organizational
7 performance [4]. The direction of the relationship is constantly positive [2]. To endure in an
8 uncertain environment, individuals and organizations must learn continuously [5, 6, 2]. The
9 culture of the organization plays a vital role in building a LO by creating an environment that
10 supports and enables learning [7].

11 In Bhutan, higher education institutions (HEIs) are facing major issues like increase of
12 tertiary enrolment in the country without a substantial increase in financial support,
13 promotion of high-quality research with limited financial and human resources, increase in
14 the number of unemployed graduates, and imparting right knowledge, skills, and attitude to
15 the college graduates needed to build a knowledge economy [8]. To meet the above-
16 mentioned challenges, learning at an individual level will not be sufficient. Colleges must
17 conform to the criteria of a LO to successfully operate in an uncertain and rapidly changing
18 environment in the knowledge age [9, 10]. But colleges and universities are believed to not
19 learn effectively and lack the attributes of a LO [11]. Education reform is imminent with the
20 grant of the Royal Kasho on December 17, 2020 [12]. OL causes sustainable educational
21 reform [13].

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22 The representation of the education sector in LO studies in the East is rare [5, 4]. Few
23 empirical studies have investigated the effect of culture on organizational learning [14]. The
24 purpose of the present study is to address this gap by focusing on the colleges of Bhutan to
25 (1) examine their LO characteristics, (2) examine their culture, and (3) investigate the nature
26 of the relationship between their culture and LO characteristics.

27 2. LITERATURE SURVEY

28 Universities around the world are increasingly facing new challenges – growth in
29 globalization, reduction in funding from the state, increased usage of information technology,
30 change in employers' demands, volatile environment, and growing competition in the labor
31 market [9, 10, 2]. They need to possess the capabilities to respond effectively to the
32 challenges in the environment. Hence, the need for universities to become LOs [15, 5, 4, 16,
33 17, 10].

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36 OL is considered a central concept in organizational theory [2]. Cyert and March [1] were the
37 first to coin the term "organizational learning" to describe the behavior of an organization
38 adapting to a changing environment. Organizations learn from experience by exploration and
39 exploitation [18]. Exploration is the process of generating new knowledge through research
40 and development. Organizations exploit established technologies and markets. Scholars call
41 the organizations that learn effectively to change and improve performance "learning
42 organizations." Geus [19] coined the term "learning organization." OL is the process by
43 which organizations transform into a LO [20]. LO is an organization that learns continuously
44 to drive continuous improvement [21]. The implementation of the concept of LO does not
45 vary based on the size, the type of activity, or internal structure of an organization [22].

Comment [DC13]: Avoid starting a sentence with an acronym.

Comment [DC14]: Was this accurate? Peter Senge wrote about it in 1990. I do not think Geus (1997) coined the term.

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47 Culture is the most important factor in influencing OL [23, 24, 3]. The capacity of an
48 organization to learn unceasingly depends on its culture. What organizations do is
49 profoundly affected by their culture [2]. Culture of an organization influences OL which in turn
50 influences the performance [25]. Meyer [26] backs up the cultural viewpoint on OL with

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1 empirical evidence. He mentions two types of OL – resilience, and retention. Resilience is
2 the capacity to survive a crisis and return to normalcy. Retention is preserving new routines
3 and knowledge generated by adjusting to the crisis.

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4
5 There is little consensus about how culture should be defined [27]. The collectively
6 possessed and symbolically expressed ideas members have about the nature of an
7 organization and the work they do are referred to as organization culture [28]. The culture of
8 an organization plays a critical role in promoting OL in a turbulent environment [7].

9
10 Abbasi and Zamani-Miandashti [15] found a positive and significant relationship between
11 organizational culture and OL in the case of public agricultural institutes in Iran. Similarly, a
12 study conducted by Dajani and Mohamad [29] in Egypt on the academicians of the
13 universities found that adhocracy culture had the strongest influence in the promotion of OL.
14 In a study of the universities in Syria, Alsabbagh et al. [14] established that adhocracy
15 culture is the sole culture to have a significant positive influence on OL. In contrast, hierarchy
16 culture had a negative influence on the learning of an organization. However, Yazici and
17 Karabag [30] discovered hierarchy culture to be the dominant culture in higher education
18 institutions in Germany. Organizational culture had a significant positive relationship with OL.
19 The participation of managers, lecturers, and researchers in the decision-making process
20 was found to have a significant positive effect on the learning and performance of a public
21 university in Vietnam [31]. Academic and non-academic staff from a collectivist culture are
22 more likely to be committed to the process of changing to a LO than those from an
23 individualist culture [5]. Different cultures of an organization influence OL in different ways
24 [32].

25
26 Learning initiatives can help organizations perform better. Various aspects of a learning
27 culture (empowering people with a collective vision, collaboration and team learning, and
28 promotion of inquiry and dialogue) are by themselves not strong enough to impact
29 performance. All of the learning efforts in organizations are mediated by leaders and
30 managers who provide strategic leadership for learning. It is the most important variable to
31 influence the performance of organizations [33].

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33 Higher education institutions are centers of teaching and research. They facilitate learning of
34 individuals, groups and contribute to the advancement of the society. They operate in a
35 constantly changing environment. Learning is considered as the only sustainable competitive
36 advantage [19]. The institutions need to transform to learning organizations to successfully
37 respond to the challenges in the environment [15, 5]. The education institutions of the East
38 are underrepresented in LO empirical studies [5]. Moreover, the relationship between culture
39 and learning in the colleges, needs to be examined.

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40 41 **2.1 RESEARCH QUESTIONS**

- 42 1. What are the staff perceptions of their colleges as learning organizations?
43 2. What is the dominant culture of the colleges in Bhutan?
44 3. What is the relationship between the culture and the LO dimensions of the colleges of
45 RUB?

Comment [DC23]: It would be best to have a hypothesis for the correlation. Based on your literature review, perhaps, you were expecting some correlation between OC and LO.

46 47 **3. METHODOLOGY**

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49 A quantitative research methodology was employed to determine the relationship between
50 organizational culture and LO dimensions of the colleges in Bhutan. Quantitative research
51 uses empirical evaluations involving numerical measurement and analysis to address
52 research objectives [34]. In quantitative research, correlational designs are techniques to

Comment [DC24]: See my comment on hypothesis.

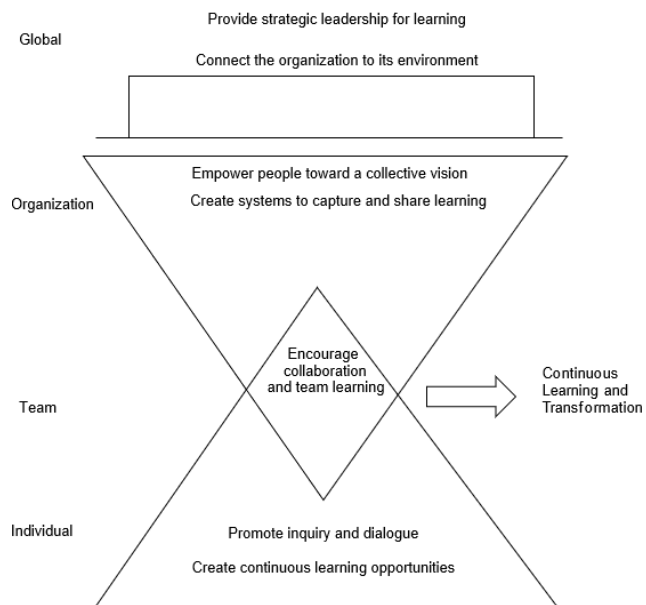


Figure 1. Watkins and Marsick's Model of Learning Organization

measure the degree of association between two or more variables using the statistical method of correlational analysis [35].

To collect data from the staff regarding their opinions about the culture and the LO dimensions in their colleges a cross-sectional survey design was employed. Researchers used a cross-sectional survey design to collect data at one point in time to describe the opinions

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23 of a population. Questionnaires were used to collect data from the staff of the colleges as it
 24 is a quick, economical, and effective form of data collection [35].

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 26 For the present study, the definition of the LO by Marsick and Watkins has been adopted. It
 27 is one of the most widely used models in research [36]. It is a complete model of OL
 28 encompassing the individuals, teams, organization, and its environment [37]. The seven
 29 dimensions of the model, as mentioned in Table 1, are the action imperatives to transform
 30 an organization into a LO. These actions occur at four different levels – individual, team,
 31 organization, and society [38].

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Source. From [39].

Table 1. Definitions of Constructs for the Dimensions of the Learning Organization Questionnaire

Dimension	Definition
1. Create continuous learning opportunities (Individual Level)	Learning is designed into work so that people can learn on the job; opportunities are provided for ongoing education and growth.
2. Promote inquiry and dialogue (Individual Level)	People gain productive reasoning skills to express their views and the capacity to listen and inquire into the views of others; the culture is changed to support questioning, feedback, and experimentation.
3. Encourage collaboration and team learning (Team or group level)	Work is designed to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded.
4. Create systems to capture and share learning (Organization level)	Both high- and low-technology systems to share learning are created and integrated with work; access is provided; systems are maintained.
5. Empower people toward a collective vision (Organization level)	People are involved in setting, owning, and implementing a joint vision; responsibility is distributed close to decision making so that

people are motivated to learn toward what they are held accountable to do.

- 6. Connect the organization to its environment
(Organization level)

People are helped to see the effect of their work on the entire enterprise; people scan the environment and use the information to adjust work practices; the organization is linked to its communities.

- 7. Provide strategic leadership for learning
(Organization level)

Leaders model, champion, and support learning; leadership uses learning strategically for business results.

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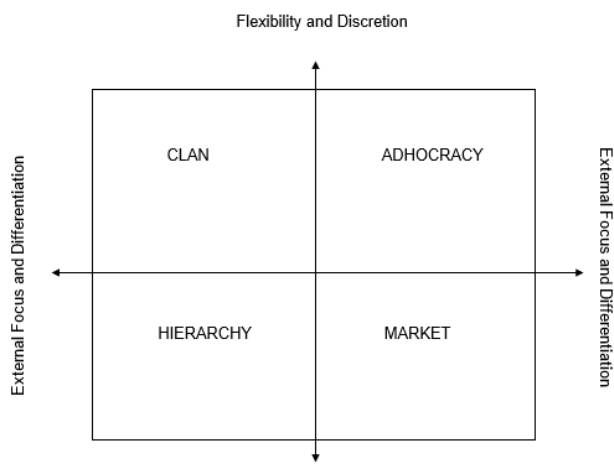


Figure 2. The Competing Values Framework

Comment [DC26]: Left side label - Internal focus and integration

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Source: From [33].

18 The Organizational Culture Assessment Instrument (OCAI) was used to diagnose the culture
19 of the colleges. It is based on a theoretical model - the competing values framework (CVF).

1 The CVF, one of the most influential and widely used models in the field of organizational
2 culture studies, has two dimensions [40]. One dimension distinguishes criteria for
3 organizational effectiveness of flexibility, discretion, and dynamism from stability, order, and
4 control. The other dimension distinguishes criteria for organizational effectiveness of internal
5 orientation, integration, and unity from external orientation, differentiation, and rivalry [41].
6 These two dimensions form four quadrants as shown in Figure 2.

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7
8 A workplace with a hierarchy culture is governed by formal rules and policies. The
9 considerations of the organization are stability, predictability, and efficiency. Such a culture is
10 expected to hamper OL activities as members will be reluctant to share and adopt new
11 knowledge [42]. An organization with a market culture functions as a market itself.
12 Competitiveness and performance are the core ideals of such an organization. It is oriented
13 towards results and values the significance of obtaining, operationalizing, creating, and
14 circulating knowledge [43]. A family-type organization with a friendly work environment has a
15 clan culture. It emphasizes teamwork, participation, and agreement. A collaborative culture
16 encourages the growth of OL [25]. A dynamic, entrepreneurial, and innovative workplace has
17 an adhocracy culture. OL activities are higher in such an organization, according to many
18 empirical studies [44].

Comment [DC28]: The two dimensions of competing values were mapped into four organizational culture types. Those four organizational culture types are known as adhocracy culture, clan culture, hierarchy culture, and market culture. Please elaborate on the framework and model because they provide essential context to understand this research study.

19 OCAI has six dimensions – dominant characteristics, organizational leadership,
20 management of employees, organization glue, strategic emphases, criteria of success.
21 These six dimensions were used to assess the four types of organizational culture – clan,
22 market, hierarchy, and adhocracy.

Comment [DC29]: I believe the OCAI was designed to assess six aspects of culture. I don't believe those six aspects of culture are dimensions of culture. OCAI is the instrument (or culture tool) based on the four competing values of the CVF.

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UNDER PEER REVIEW

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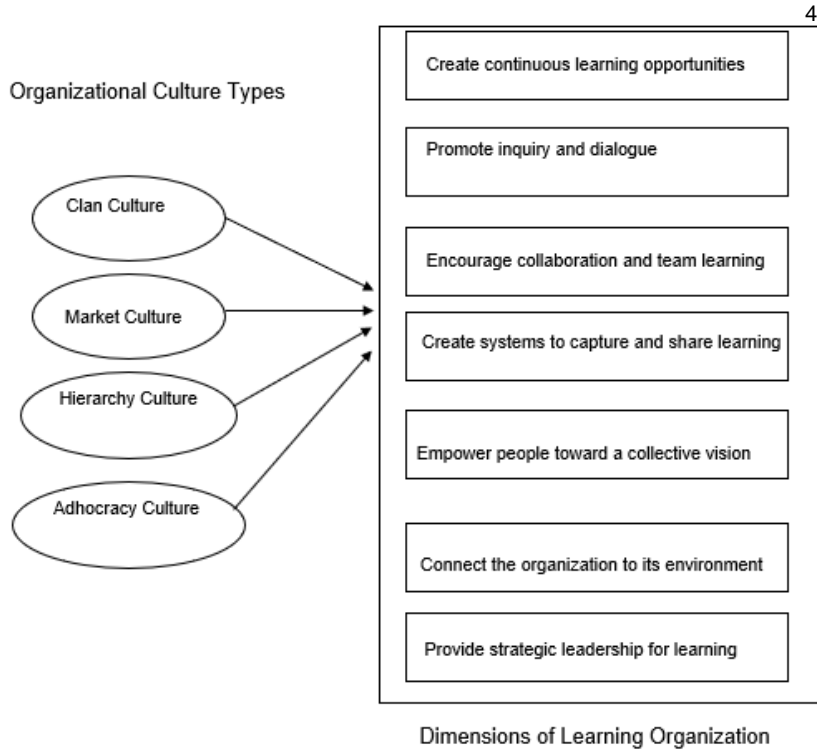


Figure 3. The Hypothesized Model

Comment [DC31]: I do not see a narrative for this figure. Please elaborate and explain in the text.

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3.1 POPULATION

The Royal University of Bhutan was established in 2003. The decentralized university manages nine constituent colleges and two affiliated colleges. The population of the study was the teaching and non-teaching staff of the colleges of RUB. The university has 543 teaching staff and 522 non-teaching staff [45]. Royal Thimphu College has 87 teaching staff and 101 non-teaching staff. Norbuling Rigter College has 25 teaching staff and 35 non-teaching staff [46].

3.1 SAMPLE

A convenience sampling design [47] was employed to select the subjects of the study, due to the travel restrictions in Bhutan because of COVID-19 pandemic.

3.3 INSTRUMENT

Comment [DC32]: How many people were selected to participate? What was the sample size? How were the participants selected? Did you use a census or a sample? Did you get the staff's contact information from human resources? Did you invite everyone to participate and see who would answer? In that case, "opportunity sampling," which is based on convenience sampling, may be more descriptive. Did you have inclusion or exclusion criteria? Did you include all full and parttime staff? Did you include remote workers? What was the composition of your sample? Please define "teaching" and "non-teaching" staff. Were "teaching staff" faculty? Readers may find the information useful when applying the research findings to their own facilities.

Comment [DC33]: How did the travel restriction affect your sampling?

The Organizational Culture Assessment Instrument (OCAI) was used to analyze the culture of the colleges [41]. The OCAI has demonstrated reliability and validity in numerous studies across countries, cultures, and organizations [30]. It measures the degree to which clan, adhocracy, market, and hierarchy cultures are prevalent in an organization. The OCAI consists of 24 items and six dimensions. For each dimension, 100 points need to be divided among four statements – A, B, C, D, considering the current state and future desired state of the organization separately. Then, the average scores were calculated for the items marked A (clan), B (adhocracy), C (market), and D (hierarchy) separately. The highest average score determines the dominant culture of the college.

The Dimensions of the Learning Organization Questionnaire (DLOQ) was used to measure the prevalence of LO characteristics of the colleges [33]. The DLOQ consists of seven dimensions. The abridged version of DLOQ consisting of 21 items was used for the study for ease of completion. It possesses reliability and validity [48]. The items were measured with a six-point Likert scale (1 = almost never and 6 = almost always). The average score was calculated for each of the seven dimensions and for all the 21 items to determine if the colleges have LO characteristics.

The data was collected by emailing the online questionnaires developed using Google Forms. The email addresses of the staff of the colleges were collected from the websites of the colleges. The survey was conducted in Bhutan between February and April 2022. IBM SPSS (Statistical Product and Service Solutions) version 21 was used for data analysis.

4. RESULTS

The participants of the study were 201 teaching and non-teaching staff of the colleges of RUB. 80.1 percent and 19.9 percent of the staff belonged to the teaching and non-teaching categories respectively. The sample consisted of 61.7 percent female and 38.3 percent male staff. The survey comprised of staff from 11 colleges (in percent): GCBS (24.4), RTC (15.9), JNEC (11.4), CST (9), NRC (8.5), SCE (7.5), SC (7.5), PCE (7), CNR (5.5), GCIT (2), and CLCS (1.3). The composition of the sample (in percent), work experience-wise (in years): 0 to 4 (39.8), 10 to 19 (25.9), 5 to 9 (21.4), 20 to 29 (10), and 30 or more (2.9). Age-wise, of the surveyed staff, 46.2 percent were of 30 to 39 years, 25.6 percent were less than 30 years, 23.1 percent were between 40 and 49 years, and 5.1 percent were 50 years and more. In the sample, most (57 percent) of the staff had master's degree, 24.5 percent had undergraduate degree, 11 percent had doctoral degree, and 7.5 percent were high school graduates.

Table 2. Sample characteristics

Variables	Frequency (n)	Percentage (%)
College		
GCBS	49	24.4
RTC	32	15.9
JNEC	23	11.4
CST	18	9.0
NRC	17	8.5
SCE	15	7.5
SC	15	7.5
PCE	14	7.0
CNR	11	5.5
GCIT	4	2.0

Comment [DC34]: You also collected demographic information from the sample, right?

Comment [DC35]: Please elaborate on the data analysis procedures. For example, describe the type of correlation statistics that was used. Also, the distribution of data plays a role on the estimation of correlations and covariances. The same applies to multiple linear regression. Should the normality of the data be tested beforehand?

Comment [DC36]: What was the response rate? It looks like the non-teaching staff response rate was very low. Based on my calculation, the overall response rate was 15.3%; however, teaching staff response rate was 24.6%, and the non-teaching staff response rate was 6.08%. How might the difference response rates affect the overall results, given that the numbers of teaching and non-teaching staff in the target population were relatively even (655 and 658)? I wonder if you can confidently generalize your findings to your target population. I wish you have done analysis between the two groups.

Comment [DC37]: Does "work experience" mean "Years of employment at the colleges"?

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Comment [DC41]: Please also describe the respondents in the text. Tables and figures should be described in the text.

CLCS	3	1.3
Gender		
Female	124	61.7
Male	77	38.3
Role		
Teaching staff	161	80.1
Non-teaching staff	40	19.9
Experience (years)		
0-4	80	39.8
10-19	52	25.9
5-9	43	21.4
20-29	20	10.0
30 or more	6	2.9
Age (years)		
30-39	92	46.2
Less than 30	51	25.6
40-49	46	23.1
50 or more	10	5.1
Education		
Master's	114	57.0
Undergraduate	49	24.5
Doctoral	22	11.0
High school	15	7.5

1 Note. GCBS = Gedu College of Business Studies, RTC = Royal Thimphu College, JNEC =
2 Jigme Namgyel Engineering College, CST = College of Science and Technology, NRC =
3 Norbuling Rigter College, SCE = Samtse College of Education, SC = Sherubtse College,
4 PCE = Paro College of Education, CNR = College of Natural Resources, GCIT =
5 Gyalphozing College of Information Technology, CLCS = College of Language and Cultural
6 Studies.

7 Source: Survey

8 4.1 LEARNING ORGANIZATION

9 As shown in Table 3, the DLOQ was found to be highly reliable ($\alpha=0.970$). The continuous
10 learning subscale consisted of three items ($\alpha=0.831$), the inquiry and dialogue subscale
11 consisted of three items ($\alpha=0.810$), collaboration and team learning subscale consisted of
12 three items ($\alpha=0.831$), strategic leadership for learning subscale consisted of three items
13 ($\alpha=0.887$), systems to capture learning subscale consisted of three items ($\alpha=0.838$),
14 empower people subscale consisted of three items ($\alpha=0.822$), and connect the organization
15 subscale consisted of three items ($\alpha=0.847$). The average of the DLOQ dimensions' ratings
16 by the staff of the colleges is 4.051, which is higher than the DLOQ scale average. The
17 dimension, connect the organization to its external environment, achieved the highest score
18 ($M = 4.270$). The dimension, foster inquiry and dialogue, achieved the lowest score ($M =$
19 3.856).

20 **Table 3. DLOQ: Cronbach's alpha, means and standard deviations**

DLOQ Dimensions	α	M	SD
1. Continuous Learning	0.831	4.093	0.081
2. Inquiry and Dialogue	0.810	3.856	0.082
3. Collaboration and Team Learning	0.831	3.997	0.077
4. Provide Strategic Leadership for Learning	0.887	4.156	0.086
5. Systems to Capture Learning	0.838	3.964	0.078
6. Empower People	0.822	4.019	0.081
7. Connect the Organization	0.847	4.270	0.081

21 Source: Survey

Comment [DC42]: Only the internal consistency of the instrument was reported here. How about the mean score of each learning levels? Did you find any differences at the three learning levels (individual, department, and college)?

Comment [DC43]: What was the "DLOQ scale average"? Please provide reference and citation. According to Yaman (2020), the regional and sectional benchmark DLOQ score was 4.82. The education sector benchmark was 5.43.

Comment [DC44]: Yaman, T. T. (2020). A sectoral and regional benchmarking study with the dimensions of learning organization questionnaire (DLOQ) scale measurements. *Elektronik sosyal bilimler dergisi*, 19(76), 1905-1915.

4.2 ORGANIZATIONAL CULTURE

The OCAI was found to be highly reliable ($\alpha=0.982$). The clan culture subscale consisted of six items ($\alpha=0.956$). The adhocracy culture subscale consisted of six items ($\alpha=0.965$). The market culture subscale consisted of six items ($\alpha=0.928$). The hierarchy culture subscale consisted of six items ($\alpha=0.937$). The dominant culture of the colleges of RUB is clan culture ($M = 41.721$, $SD = 25.314$).

Table 4. Organizational Culture Types: Cronbach's alpha, means and standard deviations (N=201)

College Culture Types	α	M	SD
1. Clan Culture	0.956	41.721	25.314
2. Adhocracy Culture	0.965	37.453	25.485
3. Market Culture	0.928	36.428	24.693
4. Hierarchy Culture	0.937	40.940	24.172

4.3 ORGANIZATIONAL CULTURE AND LEARNING ORGANIZATION

The correlations between the various types of culture and the DLOQ dimensions are shown in Table 5. Continuous learning had a significant positive correlation with clan culture ($r = 0.388$, $p < 0.05$), adhocracy culture ($r = 0.291$, $p < 0.05$), and market culture ($r = 0.178$, $p < 0.05$). Inquiry and dialogue had a significant positive correlation with clan culture ($r = 0.415$, $p < 0.05$), adhocracy culture ($r = 0.350$, $p < 0.05$), and market culture ($r = 0.253$, $p < 0.05$). Team learning had a significant positive correlation with clan culture ($r = 0.377$, $p < 0.05$), adhocracy culture ($r = 0.312$, $p < 0.05$), and market culture ($r = 0.197$, $p < 0.05$). Strategic leadership for learning had a significant positive correlation with clan culture ($r = 0.315$, $p < 0.05$) and adhocracy culture ($r = 0.240$, $p < 0.05$). Systems to capture learning had a significant positive correlation with clan culture ($r = 0.372$, $p < 0.05$), adhocracy culture ($r = 0.297$, $p < 0.05$), and market culture ($r = 0.217$, $p < 0.05$). Connect the organization had a significant positive correlation with clan culture ($r = 0.364$, $p < 0.05$), adhocracy culture ($r = 0.305$, $p < 0.05$), and market culture ($r = 0.174$, $p < 0.05$). Hierarchy culture did not have a significant correlation with any of the DLOQ dimensions.

Table 5. Correlations of the dimensions of organizational culture and learning organization (N=194)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Clan	-										
(2) Adhocracy	0.921*	-									
(3) Market	0.843*	0.909*	-								
(4) Hierarchy	0.782*	0.834*	0.894*	-							
(5) Continuous Learning	0.388*	0.291*	0.178*	0.120	-						
(6) Inquiry Dialogue	0.415*	0.350*	0.253*	0.135	0.786*	-					
(7) Team Learning	0.377*	0.312*	0.197*	0.099	0.802*	0.807*	-				
(8) Leadership	0.315*	0.240*	0.127	0.042	0.810*	0.773*	0.807*	-			
(9) Systems Capture Learning	0.372*	0.297*	0.217*	0.097	0.780*	0.798*	0.822*	0.817*	-		
(11) Connect Organization	0.364*	0.305*	0.174*	0.0s83	0.800*	0.743*	0.802*	0.870*	0.784*	0.822*	-

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Comment [DC45]: One of the LO dimension was missing!

Multiple linear regression was used to test if culture types significantly predicted DLOQ dimensions. The assumptions of multiple linear regression were checked. None of the cases had undue influence on the model as none of the variables in the analyses had a Cook's distance greater than one [49]. The data has not broken the assumptions of linearity and homoscedasticity. Market and adhocracy cultures were not included in the regression model as the variance inflation factor (VIF) values were more than 5 [50]. The regression analysis findings are presented in Table 6.

Comment [DC46]: Can you explain why multicollinearity was detected in Market and Adhocracy cultures? Based on the DLOQ, they don't seem to be closely related theoretically.

Clan and hierarchy culture significantly predicted continuous learning. The fitted regression model was: Continuous Learning = $3.574 + 0.037 \cdot \text{Clan} - 0.024 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.2293$, $F(2, 197) = 30.61$, $p = 0.0000$). It was found that clan culture significantly predicted continuous learning ($\beta = 0.756$, $p = 0.000$). It was found that hierarchy culture significantly predicted continuous learning ($\beta = -0.471$, $p = 0.000$).

Comment [DC47]: Fortunately, clan and hierarchy cultures were scored the highest among the respondents.

Clan and hierarchy culture significantly predicted inquiry and dialogue. The fitted regression model was: Inquiry and dialogue = $3.290 + 0.039 \cdot \text{Clan} - 0.025 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.2572$, $F(2, 198) = 35.63$, $p = 0.0000$). It was found that clan culture significantly predicted inquiry and dialogue ($\beta = 0.797$, $p = 0.000$). It was found that hierarchy culture significantly predicted inquiry and dialogue ($\beta = -0.489$, $p = 0.000$).

Clan and hierarchy culture significantly predicted team learning. The fitted regression model was: Team Learning = $3.571 + 0.037 \cdot \text{Clan} - 0.026 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.2405$, $F(2, 196) = 32.34$, $p = 0.0000$). It was found that clan culture significantly predicted team learning ($\beta = 0.798$, $p = 0.000$). It was found that hierarchy culture significantly predicted team learning ($\beta = -0.533$, $p = 0.000$).

Clan and hierarchy culture significantly predicted strategic leadership for learning. The fitted regression model was: Strategic Leadership for Learning = $3.810 + 0.038 \cdot \text{Clan} - 0.029 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.1985$, $F(2, 197) = 25.65$, $p = 0.0000$). It was found that clan culture significantly predicted strategic leadership for learning ($\beta = 0.726$, $p = 0.000$). It was found that hierarchy culture significantly predicted strategic leadership for learning ($\beta = -0.526$, $p = 0.000$).

Clan and hierarchy culture significantly predicted systems to capture learning. The fitted regression model was: Systems to Capture Learning = $3.526 + 0.036 \cdot \text{Clan} - 0.024 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.2258$, $F(2, 195) = 29.73$, $p = 0.0000$). It was found that clan culture significantly predicted systems to capture learning ($\beta = 0.757$, $p = 0.000$). It was found that hierarchy culture significantly predicted systems to capture learning ($\beta = -0.494$, $p = 0.000$).

Clan and hierarchy culture significantly predicted empower people. The fitted regression model was: Empower People = $3.645 + 0.033 \cdot \text{Clan} - 0.024 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.1786$, $F(2, 196) = 22.53$, $p = 0.0000$). It was found that clan culture significantly predicted empower people ($\beta = 0.683$, $p = 0.000$). It was found that hierarchy culture significantly predicted empower people ($\beta = -0.463$, $p = 0.000$).

Clan and hierarchy culture significantly predicted connect the organization. The fitted regression model was: Connect the Organization = $3.836 + 0.038 \cdot \text{Clan} - 0.027 \cdot \text{Hierarchy}$. The overall regression was statistically significant ($R^2 = 0.2296$, $F(2, 198) = 30.80$, $p = 0.0000$). It was found that clan culture significantly predicted connect the organization ($\beta =$

0.770, $p = 0.000$). It was found that hierarchy culture significantly predicted connect the organization ($\beta = -0.519$, $p = 0.000$).

Table 6. Regression Analysis of Culture Types on Learning Organization Dimensions

Dependent Variable	Variables	Beta	Std. error	t	Prob	Adjusted R Square
Continuous Learning	Clan	0.756	0.005	7.58	0.000	0.2293
	Hierarchy	-0.471	0.005	-4.72	0.000	
Inquiry and Dialogue	Clan	0.797	0.005	8.15	0.000	0.2572
	Hierarchy	-0.489	0.005	-5.00	0.000	
Team Learning	Clan	0.798	0.005	7.88	0.000	0.2405
	Hierarchy	-0.533	0.005	-5.26	0.000	
Strategic Leadership	Clan	0.726	0.005	7.13	0.000	0.1985
	Hierarchy	-0.526	0.006	-5.16	0.000	
Systems Capture Learning	Clan	0.757	0.005	7.55	0.000	0.2258
	Hierarchy	-0.494	0.005	-4.93	0.000	
Empower People	Clan	0.683	0.005	6.62	0.000	0.1786
	Hierarchy	-0.463	0.005	-4.50	0.000	
Connect the Organization	Clan	0.770	0.005	7.73	0.000	0.2296
	Hierarchy	-0.519	0.005	-5.21	0.000	

5. DISCUSSION

RUB can be considered as a learning organization, as the average of the DLOQ dimensions' ratings by the staff is higher than the DLOQ scale average. Similarly, universities in Estonia, Indonesia, and Spain were found to be learning organizations [51, 52, 10]. The staff in the colleges and universities are more educated than average. Teaching and mentoring students and conducting research require constant individual level learning, that is transferred to the organization. The DLOQ dimension, foster inquiry and dialogue, achieved the lowest score. It indicates lack of feedback and open exchange of ideas in the colleges. Low-listening cultures discourage conflicting perspectives. The colleges emphasize hierarchy and status over idea quality. Conversations do not encourage questioning. There may be a culture of fear in the colleges. This is in contrast with Estonian universities, where research funding is project-based, promoting teamwork [10]. The dimension, connect the organization to its external environment, achieved the highest score. It indicates that the colleges and the university can better adjust to the environment and are concerned with customers' opinions. It has to meet the employers' demands. Such organizations consider potential global effect on them. The finding is in contrast with the literature. It is said that universities find it difficult to adapt to the environment [53]. Like the present study, Mababu and Revilla [52] found no significant gender differences for DLOQ dimensions in case of faculty members of different universities in Spain.

The dominant culture of the colleges of RUB is clan culture, characterized by a family type of organization, which is like that in public and private universities in Egypt and USA [29, 54]. But Yazici and Karabag [30] found hierarchy culture to be dominant in the higher education institutions (HEIs) in Germany. The workplaces are highly formalized and structured. In comparison to other national cultures, Germany has a high level of individualism and uncertainty avoidance [55]. In individualistic societies, tasks take precedence over

Comment [DC48]: Please include limitations of the study and potential biases.

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Comment [DC50]: See earlier comment. Please define "DLOQ scale average" and provide citation.

Comment [DC51]: requires

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Comment [DC53]: Unnecessary comma

Comment [DC54]: the potential

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Comment [DC56]: I don't think this finding was presented in the article.

Comment [DC57]: the case of

Comment [DC58]: It is interesting to note that both clan and hierarchy cultures scored the highest among the respondents. Both of these cultures have internal organization as priority with people-focus and well-defined processes.

relationships. The differences in the dominant culture of HEIs can be understood by considering the national culture.

The study explored the relationships between the various types of organizational cultures (Cameron & Quinn, 2011) and the learning organization dimensions [33] prevalent in the colleges of RUB. Clan culture significantly positively predicted, and hierarchy culture significantly negatively predicted the dimensions of a learning organization – continuous learning, inquiry and dialogue, team learning, strategic leadership for learning, systems to capture learning, empower people, and connect the organization. These predictors predicted 17.86 percent to 25.72 percent of the variance in the learning organization dimensions. Similarly, Oh and Han [42] found that clan culture has a strong positive relationship with organisational learning in private sector companies in Korea. In Egypt, in public and private universities, clan culture was significantly positively associated with organisational learning capability [29]. Learning activities are promoted at numerous levels in a human-relations-focused culture [56]. In contrast, hierarchy culture was found to be prevalent in the higher education institutions in Germany [30]. Highest level of LO activities are achieved in HEIs with clan culture and lowest level of LO activities are achieved in HEIs with hierarchy culture. So, the HEIs need to orient themselves towards collaboration instead of control. Based on a study of teaching and non-teaching staff of universities in UK and Vietnam, Bui and Baruch [5] found that employees in a collectivist culture were more likely than those in an individualistic culture to be dedicated to the process of becoming LO.

6. CONCLUSION

The main contribution of the study is to provide insight on the important role of organizational culture to promote organizational learning in the context of higher education in Bhutan. Clan culture can promote, and hierarchy culture may act as a barrier for OL activities. The management of the colleges need to understand the importance of the different types of OC and make use of them suitably to stimulate learning activities in the colleges. Within an organization, learning takes place at multiple levels. Learning is a critical ability that enables organizations to adapt to changing circumstances and improve performance [42, 33].

Future research needs to consider other dimensions of culture to understand its influence on learning activities in an organization. Ethical and trusting cultures promote knowledge sharing within an organization [43]. Future studies should also examine whether hierarchy culture has only negative influence on learning activities of the colleges. Knowledge distribution throughout organizations is enabled by structured systems [57]. Controlling procedures that are well-designed provide more clarity [58].

The notion of learning organization is not just a passing fad. It has the potential to challenge established management practices [59]. Other areas of the economy are striving to implement the learning organization's ideals. Colleges and universities, because of their privileged position, have a unique opportunity to lead the development of the notion in both practice and theory.

Comment [DC59]: Insight into

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