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RESEARCH PAPER

Innovative Culture and Students' Learning in Higher Education Institutions

[1]Dr. Nadia Noor* **[2]Ar. Dr. Yasmeen Ahmed** **[3]Ar. Uffaq Shahid**

1. Assistant Professor, Department of Management Sciences, Lahore College for Women University, Lahore, Punjab, Pakistan
2. Assistant Professor, Department of Architecture, Lahore College for Women University, Lahore, Punjab, Pakistan
3. Lecturer, SADU-School of Architecture, Design and Urbanism, Institute for Art and Culture, Lahore, Punjab, Pakistan

***Corresponding Author:** nadiarandhawa397@gmail.com

ABSTRACT

Universities are usually the homeland of every successful person belonging to any field of study. These play an important part in creating, developing, polishing and exhibiting the skills of students. Keeping this in view, the present study is an attempt to investigate about the existence of innovative culture (independent variable) in higher education institutions of Lahore, whether or not, it influence the performance of students (dependent variable). The dimensions considered here are; resources, motivation, risk taking, leadership for innovative culture and trust, commitment, interest and recognition for learning and performance. Triangulation is used in which quantitative and qualitative approaches are considered to properly investigate the situation. Data was collected from students of public and private sector universities. For qualitative research, data was collected through structured interviews while questionnaires were used to collect quantitative data. Interpretative approach was used for qualitative analysis while quantitative data was assessed on SPSS version 17.0 using descriptive and regression tests. Results revealed existence of positive relation between the two key study variables with the interaction of learning capability of students. Leadership role and motivation are the dimensions of innovative culture that are highly associated to performance of students.

KEYWORDS Innovative Culture, Leadership, Performance, Resources, Trust

Introduction

Higher Education Institutions nurture innovation and are considered as engines of countries growth and development (Crosling, Nair, & Vaithilingam, 2015). Universities are hub of innovation and create innovative and improved products and services and supply expertise, training and human resources (i.e. potential innovators) to organizations and societies (Al-Husseini & Ebeltagi 2016). Over the last decades, significance of innovation in the workplace has increased as a key performance output. Tough innovation can sometimes be counterproductive to other facets of performance and may not necessarily always be beneficial for organizations (Anderson, Potocnik & Zhou, 2014). Innovation implies intentional introduction of improved ways of doing things and enable organizations to react and adapt to market changes and perform efficiently in changing business environment (Schaltegger, Lüdeke-Freund & Hansen 2012). Human capital working across all hierarchal levels of organizations contribute to such innovative capability (Axtell, Holman & Wall, 2006).

Today's undergraduates are the major source of future innovations in organizational settings where they will perform as tomorrow's employees. These university students are emerging adults and develop long term values, behaviours and attitudes including creativity and innovation in context of higher education before they enter labour market (Bowman 2010). Furthermore, graduate competencies or outcomes can be described as the end result

or product of their university experience. One of those expected graduate competence is innovation. Higher education institutions lack feasible resources and procedures required for promotion of innovative capability of undergraduates (Ailing et al., 2013). This could be due in part to the prevailing focus of the research on student innovation, mainly concerned with the study of university students' innovativeness. However, individuals' innovation could also be regarded as a behaviour that implies new ways of doing things, fostered, among other resources, by having autonomy in carrying out one's own tasks and assignments. In this context, this study investigates individual innovation behaviours among university students, trying to highlight its main influences, such as autonomy and cognitive demands. In so doing, this study can potentially speak to a broad academic audience concerned with curricula design in Higher Education that aims to foster student innovation behaviours. Students need to develop new survival skills, effective communication and critical thinking skills. HEIs need to nurture creative, curious, critical thinking, self-directed and independent entrepreneurs (Serdyukov, 2017).

In Pakistan, the creation of HEC positively impact higher education due to its prominent achievements involving the establishment of digital library, three times increase in the university enrolments, amplification in international research publications, internationally recognized degrees of undergraduate (four-year) program and awarded PhD scholarships by advanced countries (Digital Library & World Defence Network, 2012). Further, provision of video conferencing helped in enhancing interaction of students with teachers and to meet shortage of good faculty at far away areas. For this, currently operational sites all over Pakistan are 65 for interaction and conducting lectures. There is a need to create suitable conditions in institutions that readily support innovation. Hence, HEIs in Pakistan must adapt innovative culture to meet the growing needs in context of improved methods of learning and innovation to facilitate development of students. The points to ponder in this regard are innovation, learning and organizational performance which are positively related to one another (Daniel et al, 2011). The implementation of these new methods of learning and facilitation towards innovative culture has positive impact on the performance of students. Students' learning aptitudes are polished when they learn according to new methods which further facilitates enhancement in creative abilities.

Therefore, this study aims to examine that whether the students at professional levels are achieving or acquiring the knowledge and ways of getting knowledge in an impressive mode in order to learn and perform better in their careers or related fields in life. In this case, the important role is played by the institution from where they are getting professional education and the faculty from whom they are receiving this knowledge. Somehow both of these aspects are necessary to make the students more competitive and to move forward in life.

Literature Review

According to Cameron and Quinn (1999), culture of organizations is of four types: (a) hierarchy, (b) market, (c) clan, and (d) adhocracy. This study focuses on innovative culture which is more closely related to the fourth type of culture i.e. adhocracy because it is conducive to innovation and emphasize the flexibility. An innovative culture can be defined as the culture supporting, creating and implementing new ideas. The integration of education and science which is the basic aim of HEIs also promotes the establishment of innovative culture. Supporting the innovative culture can help HEIs in achieving their significant goals (Roffeei, Yousop & Kamarulzaman, 2018). Significant contribution in innovation, social and economic growth can be made by HEIs of any country (HEC Magazine, 2015). Innovative culture pushes students of educational institutions to indulge in innovative work and show their inventive capabilities in the work behaviour. Today success is measured in form of innovations hence adapting the environment that facilitate any type of positive innovation is essential. Generally, students work more dedicatedly in an environment that is more conducive for sharing of ideas among themselves and also with

faculty members. That in turn drives them with high level of motivation towards performing better and achieving good grades (Roffeei, Yousop & Kamarulzaman, 2018)).

Innovative culture is the part, type or form of a culture in which new ideas, techniques, and technologies can be implemented in a convenient way. Moreover, it can be said that the extent of flexibility or readiness to accept something that seems to be beneficial to some extent. As reported by Khazanchi et. al (2007) that organizational values (i.e. flexibility and control) are considered to understand deeply about the innovation-supportive culture. Basically, the learning culture of organizations incorporates the innovative culture and which has impact on innovation (Skerlavaj et al, 2010). When the innovative capability maximizes, then the learning culture creates in high performance organizations. So, the culture of organizations must be flexible enough to adapt any positive change of external environment, but some of the requirements and demands of workplace still could not be anticipated because a number of sub cultures exist in organizations.

On the basis of John Dewey and Kurt Lewin theories, learning space was introduced as a concept to understand the learning styles of students and learning environment of institution. Experiential learning is applied in higher education through development programs like outcome assessment, development of curriculum, student and faculty (Kolb & Kolb, 2005). According to Sohail and Daud (2009), HEIs of Malaysia are in need to provide facilities for encouraging teaching staff to share knowledge. In this context, the identified measures are working culture, the attitudes of staff, knowledge nature, motivation and opportunities towards sharing. Kezar and Eckel (2016) discussed the culture effect of higher education on the strategies of change in U.S. The change was considered in the form of financial pressure, technology growth, change faculty roles, demographics change, competing values and public scrutiny.

Eynde et. al (2015) have identified factors responsible towards innovation development in organizations. The prominent factors found are motivation, orientation, creativity, tolerance of risk, safety as openness and trust. Other factors are autonomy, resources attribution, technological capacity, flexibility and cooperation, knowledge and communication, and leadership style. So innovativeness is a mean towards achieving goals but not itself a goal. Conforming to Serdyukov (2017), supporting the development of innovative culture is one of the significant objectives of HEIs today. New generation requires new skills and behavioural patterns that make all economic sectors and society modernized. Bodla et al., (2013) suggest that different dimensions of culture have an impact on the performance of universities in Pakistan. However, well communication throughout can make employee more or less satisfied and committed which directly effects the performance improvement of organizations. Rachel (2013) explored the learning culture of students in universities of Pakistan. The new comers in the universities face difficulties to a great extent because they possess low level of skills related to information and communication technologies than those in advanced countries.

When core values of organizational innovation are implemented, the employee work productivity increases (Masood ul Hassan et al, 2012). The relationship of innovation-performance also depends on contextual factor i.e. firm's age, innovation type and some other cultural contexts (Rosenbusch et al., 2011). Accordingly, educational innovations depend on the interests of various factors like parents' and teachers' commitment, to own the policy created; that are not much relevant but teachers' behavior needs to be altered by realizing their main aim that their cooperation instead of influence may lead towards the effective implementation of educational innovations (Warwick et al, 1991). Arfeen & Khan (2009) argued about innovative culture of public and private sector. Private sector recognizes that innovation is important for survival and earning profit. Contrary to it, public sector is lacking behind due to limited understanding and recognition of innovation importance. Findings stated that public sector as being large organization consists of

complex systems, cultures and interests whereas private sector possesses one mission, market and specific requirements of customers, so have strong engagement for innovation.

Theoretical Framework

The concern of this study is to investigate the relationship between innovative culture and learning of students in different universities of public and private sector. Ahmed (1998) explored that organizations that are paying attention to innovative ideas requires the culture to support innovation and creativity. But not alone innovation is sufficient; there must be an environment in organizations that is pleasant to adapt those innovations. Positive features of culture can be the ingredients for innovations. For developing new ideas, possibilities, and how those ideas executed; the total of time and training are given to employees. Prominent elements involved are built-in resource slack; funds and budgets; time; opportunities; tools; infrastructure e.g. rooms, equipment etc; continuous training; encourage lateral thinking; encourage skills development. Moreover, new ideas execute easily where trust is high. For this, the extent of emotional safety experienced by employees among their relationships professionally must be determined (Ahmed, 1998). Kontoghiorghes et al. (2005) described that professional job performance depends on the factors labelled as resource availability along with facts, information and time. Hence to perform job in professional way, there must be availability of all materials, equipment, facts, information, time and support to employees. Similarly, this dimension of innovative culture is applicable on educational institutions whether students are provided with enough resources for their education and more specifically for advancement of their ideas that build trust relationship of students with their institution to freely share their new ideas.

Hypothesis 1 The institution has significant resources that enhance learning and performance.

White (2007) suggests that when people are given with the opportunity to express their ideas and perform the process, this results in creating the work ownership. Due to it, they become more concerned and enthusiastic with routine tasks for the solution of problems occurred. Motivation refers to the empowerment of employees at workplace to perform their tasks creatively. Employees should be motivated through empowerment to enhance organizational performance. Roffeei, Yousop & Kamarulzaman (2018) suggested that to innovate, empowering people is the way useful for leaders by mobilizing people energies in becoming creative. When support and commitment of leadership combined with empowerment, it creates innovation ownership by people. Where strong cultures exist, empowerment helps in guiding behaviour and actions, developing energy with enthusiasm in acquiring innovation goal by working consistently. Kontoghiorghes et al., (2005) suggested that learning and development require support and recognition as the key factor. Moreover, in learning organizations, employees receive encouragement along with support for growth opportunities. The most important is recognition and praise received by employees when they engage in learning new things while performing job. Another pivotal factor is rewards for new ideas, learning, and performance.

Hypothesis 2: Motivation to express creative ideas results in better performance.

Ahmed (1998) suggested that to execute and define work, individuals need latitude to some extent, refers to freedom and risk-taking. For talking about issues lively and openly, to which extent employees have freedom and how well the views of minorities are listened readily with open mind, containing elements as “freedom to experiment; expect and accept conflict; accept criticism; don’t be too sensitive”. Behaviour of risk taking and new ideas trial are the variables that must be promoted by organizations to extent it requires and it is named as New Idea Promotion and risk-taking factor (Kontoghiorghes et al, 2005). Taking risk to introduce new ideas is considered an important requisite in creating innovative culture in organizations. For educational institutions, when teachers motivate students to

do projects in new and creative ways, it enhances interest of students for learning and experimenting creative ideas in studies that in turn exhibit their performance.

Hypothesis 3: The institution provides chances to take risk in experimenting creative ideas that improves performance.

Ahmed (1998) described that organizational leaders are responsible for creating culture that foster and appreciate innovation at every tier. To make a culture sustainable and successful for innovation, two tasks must be performed by leaders. First leaders must heartily aware of rapidly changing environment and their impact on others. Second is the leaders' ability to manage ambiguity. Commitment and involvement of leaders are defined as the extent of exhibiting the real commitment and leading through self-actions. Daryono et al. (2015) used different theories of knowledge, leadership, learning and creativity. The theories interpreting the influences of leadership on creativity are adapted which has two branches. First is "theory of direct effect", in which leadership directly affects creativity through leadership behaviour and personal creativity of leaders (Sternberg & Vroom, 2002). Second is "theory of indirect effect", in which leadership indirectly affects creativity through leadership ability in shaping or changing contexts where employees work (Scott & Bruce, 1994; Kazama et al., 2002; Reiter-Palmon & Illies, 2004; Thamain, 1990, 1996, 2003; McDonough, 1993); and creation of cooperative, flexible, and adaptive climate (Parthasarthy & Sethi 1993). Leadership plays pivotal role in introducing innovative culture. For educational institutions, leadership role can be played by teachers who lead their pupils towards better understanding of their courses. This can also be done by guiding students' creative thinking that is workable for showing outstanding performance.

Hypothesis 4: Leadership role is critical to guide the innovative ideas towards the right path.

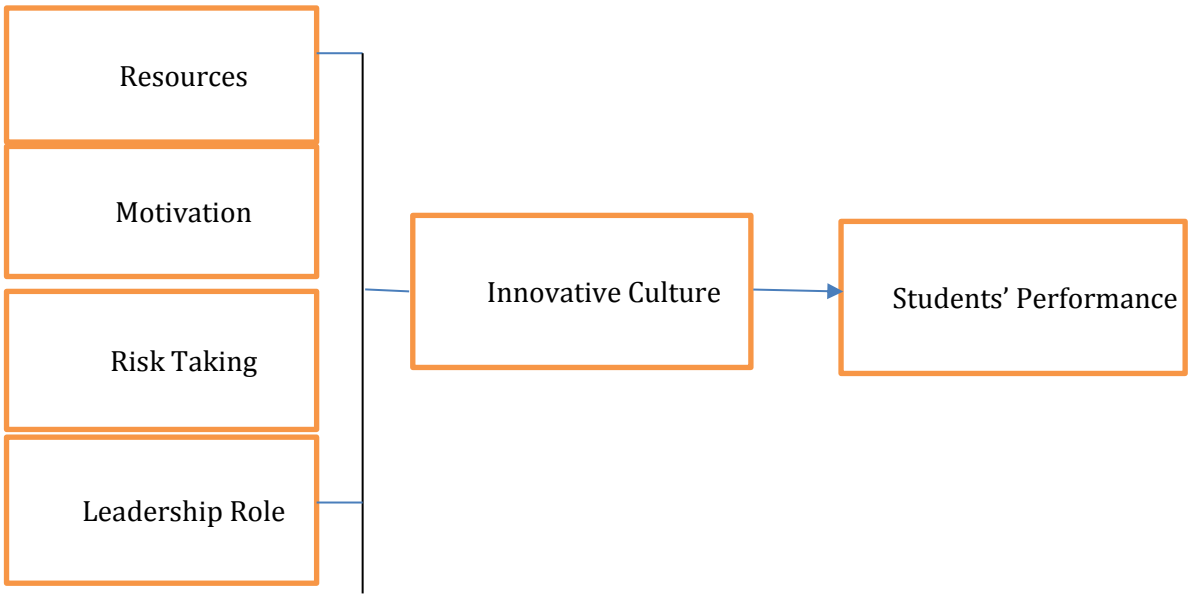

Figure 1: Theoretical Framework

Material and Methods

In social sciences, triangulation approach (also known as 'mixed method' research) is used widely these days which commonly refers to use of more than one method for validity and generalizability of results in a study. Therefore, in the present study, at first stage qualitative data is collected explore themes to develop questionnaire for quantitative data collection. Target population of the study is students of some selected higher education institutions of Pakistan belonging to both public and private sector. For qualitative data collection, 12 interviews are conducted from students of six HEIs in Lahore. Interpretive

approach has been used for qualitative data analysis. For quantitative approach, convenience sampling is used. Data collection technique used is questionnaire. Data was collected from six universities including LCWU, PU, UET, COMSATS, UOL and UMT. Questionnaires were distributed among students of BS, MS and PhD including study fields of business education, engineering, economics and IT. For Pilot study, 20 questionnaires were distributed to students from different fields of study. Questions of both variables were rated on the five-point Likert scale. For innovative culture, the value of chronbach alpha is 0.778 and for students' performance, its value is 0.818 that shows the instrument is good and acceptable enough to use in this research (DeVellis, 1991). So, in this study, the sample size taken for quantitative data collection is 200 questionnaires.

Results and Discussion

The sample demographics of gender, age, institution, degree title and study field were calculated and are presented as follows:

Table 1
Sample Demographics

Variable	Frequency	Percentage
Gender		
Male	70	37.4
Female	117	62.6
Age		
20 & Below	31	16.6
21 – 25	141	75.4
26 & Above	15	8.0
Institution		
LCWU	40	21.4
PU	24	12.8
UET	30	16.0
UOL	39	20.9
COMSATS	28	15.0
UMT	26	13.9
Degree Title		
BBA	37	19.8
BS	61	32.6
MBA	4	2.1
MS/M.Phil	30	16.0
Other	55	29.4
Study Field		
Management	78	41.7
IT	12	6.4
Economics	4	2.1
Engineering	29	15.5
Other	64	34.2

Correlation:

Correlation among variables is calculated to measure strength of relationship of variables. In present study, correlation was calculated and all variables are positively correlated at the 0.01 level.

Table 2
Correlations

	1	2	3	4	5	6
Innovative Culture	1	0.569**	0.815**	0.834**	0.763**	0.664**
Performance	0.569	1	0.394**	0.486**	0.357**	0.604**
Resources	0.815**	0.394**	1	0.534**	0.433**	0.423**
Motivation	0.834**	0.486**	0.534**	1	0.558**	0.494**
Risk Taking	0.763**	0.357**	0.433**	0.558**	1	0.342**
Leadership	0.664**	0.604**	0.423**	0.494**	0.342**	1

**Correlation is significant at the 0.01 level (2-tailed).

Regression

For testing hypotheses, regression analysis was performed to find association between different variables. All hypotheses were accepted as $p<0.05$. Table 3 shows summary of regression analysis.

Table 3
Regression

Regression	B	Sig.	R	R Square	F	Sig.
(Constant)	1.722	.000[b]	0.569[a]	0.324	88.615	.000[a]
Innovative Culture	0.642	.000[b]				
(Constant)	2.743	.000	0.394	0.156	34.072	.000
Resources	0.365	.000				
(Constant)	2.458	.000	0.486	0.236	57.251	.000
Motivation	0.422	.000				
(Constant)	2.914	.000	0.357	0.127	26.936	.000
Risk Taking	0.304	.000				
(Constant)	1.964	.000	0.607	0.369	108.21	.000
Leadership	0.521	.000				

Discussion

Results of quantitative data through questionnaires revealed that some but not all HEIs adapt innovative culture to somehow greater or lower extent, basis on their consideration of this aspect. About 67% of students responded positively about the dimensions administered to them in questionnaire for innovative culture of their institutions. It can be said that among the sample of HEIs, more than half students agreed to have innovative culture in their respective HEI. So, the solution of first research question is arrived in positive way up to greater extent. Then the second question about relationship existence of both variables is to be discussed. Correlation was used to measure the

relationship and significant relationship between the two variables is observed ($p < 0.01$) showing that there is impact of innovative culture on the performance of students. Moderate and positive correlation also found between variables as value of correlation coefficient is 0.57 (Richard Taylor, 1990). It shows that almost all dimensions of both variables are positively associated with the respective variable. Similarly as HEIs adapt more the innovative culture, the better learning and performance of students can be exhibited. In addition, 83% of students believed that their performance improves when this type of culture incorporates in the institution.

The essential part of discussion of results is to combine both data (quantitative and qualitative) received from students. In interviews (qualitative approach), questions about all the dimensions of both variables were asked from students to get detailed information about their institutions according to their personal opinions.

Resources and Performance

As answering about the availability of resources institution provides to its students, different responses from different fields of study and from public and private institutions were received. It depends on the funding HEC provides to HEIs for proper usage as where required. But somehow the students of both public/private sectors are satisfied with the facilities they need for their studies to understand, learn and perform better. So this dimension has direct link with performance of students but clearer situation can be analysed by checking the proposed proposition as linking resources to the level of students' performance in studies. For instance if they know that proper platform (including resources of time, cost, technology) is available to them for their ideas' execution, then they share their ideas. That in turn enhances their learning capability and performance in studies. So to conclude the first proposition, it can be said that students share their innovative ideas because they know that those require particular platform or resources needed to execute ideas. Also, they have access to resources that facilitate in their studies. So the proposed proposition is accepted. This is also proved by quantitative results that significant positive relationship found between resources and performance ($\beta = 0.365$; $p \leq 0.05$). Moderate positive correlation between them also found ($r = 0.394$). This finding was discussed by Kontoghiorghes et al (2005) in his study. According to him, resources availability is one of the characteristics of learning organization to perform the job professionally.

Motivation and Performance

Motivation comes before performance and that relates to the second proposed proposition. As if the culture of motivating students is in process of institutions then they can freely share their ideas and becoming committed towards their studies by showing good performance. Considering the responses of students for motivation, positive points of views were received mostly but in different ways. Teachers motivate them to participate in class discussions by giving their views, ideas and examples that help students in understanding the course better and creative thinking enhanced. Moreover, encouragement to do assignments, projects and presentations according to their personal views by searching about the topic broadly from different sources enhances their learning capability. Linking the positively received motivation to the performance of students is required to satisfy the proposition. So this proposition of linkage between motivation and performance supported positively in the context of HEIs because when appreciation and encouragement combine it motivates students towards completing their assigned task and hence doing it better to show good performance. Quantitative results also revealed positive and significant relation between motivation and performance ($\beta = 0.374$, $p \leq 0.05$). Moderate positive correlation is hence also found ($r = 0.486$). This finding was suggested by Selesho (2012) that in event of adopting the new approaches, institutions use different motivators that result in learning as of expanding thinking and problem-solving capacities. Highly innovative HEIs not only create technical capabilities and expertise but also promote sense of sharing and

togetherness. Good interpersonal relations support and encourage motivation, teamwork and innovative behaviour (Roffeei, Yousop & Kamarulzaman, 2018).

Risk Taking and Performance

For trying new things or ideas, there is always risk of failure but chances of success too. So the extent of risk whether HEIs are providing to their students is hence obligatory to discuss. According to students, they are mostly risk takers because they want change after short intervals of time and also it is needed to foster with the rapidly changing trends which helps in turn to keep pace with the advancing world. So far, only a few numbers of students do not take serious risks in studies as they fear of negative outcomes but this depends on the institution whether it encourages trying something different in course. However, students take many risks on the short note like do not follow deadlines, making assignments and preparing for quizzes and exams on the last moment and etc. But students take risk in supporting their view points during presentations and seminars due to different motivators behind it. So proposing and defending their ideas towards panel of judges or teachers are occurred in HEIs and mostly, if not all students do have confidence in performing this.

Young generation has interest in accepting challenges and taking risk in getting their objectives. HEIs play a part in building or enhancing interest of students with their courses by organizing activities, festivals and exhibitions to provide chances to their students to show their talent by making and displaying projects according to their innovative ideas. Hence, the third proposition is also supported by students' opinions that their risk taking behaviours make them curious towards achieving their desired goal or performance. Further the quantitative results are also exhibiting positive and significant relation between risk taking and performance ($\beta = 0.304$; $p = 0.05$). Also the moderate and positive correlation found between them ($r = 0.357$). This finding correlates with previous researches. Kontoghiorghes et al. (2005) examined relationship of risk-taking as a learning characteristic with performance of organizations. According to Ahmed (1998), when empowerment is given to employees for their work then they must know the risk level that can be taken by them safely. Self-efficacy reduces risk and is the important determinant of innovative culture that results in innovative behaviour (Roffeei, Yousop & Kamarulzaman, 2018).

Leadership and Performance

Leadership influences people to do whatever they want by showing them the right path towards achievement of their purposes. From the viewpoints of students, whether faculty of HEIs provides leadership to students or not, is going to be discussed here. So the next proposition is linking of the provision of leadership with the performance of students. Students belonging to different fields of study require different extent of leadership as requirement of their courses whether to some extent or greater. It depends on the context where training of faculty is provided to guide students properly. Obviously when skilled, capable and talented teachers are hired by HEIs then this quality of guidance and leading students' ideas towards the appropriate path may lead to success. As discussed earlier that some fields require more practical work along with their studies like medical, engineering, architecture, media and communication. Teachers are a role model for students to learn the practical aspects by following the guidance of their professional teachers. Furthermore, teachers lead students according to their interests by providing platform to participate in festival and programs by implementing their ideas of interest and show practical performance.

In social, administrative and management sciences; more theoretical work is involved still practical examples related to course are provided to students. In addition, different projects assigned to students in which they visit the industries and get practical knowledge from there. Now come towards proposition satisfaction by linking this leadership role with the performance of student. Thus, leadership helps in boosting the

confidence of students to perform better in future also by continuing their efforts. So, positive link of both variables satisfies the proposition. If more leadership is provided to encourage students towards achieving their goals then it makes their morale high towards future performance and accomplishments. Additionally, quantitative results show significant and positive relationship between leadership and performance ($\beta = 0.521$; $p \leq 0.05$). Also, findings of correlation coefficient suggest the moderate and positive correlation between them ($r = 0.607$). This finding was discussed previously by Llore´ns Montes et al. (2005) who verified that leadership is a characteristic that affect learning and innovation. Innovations grow in favourable environments and cultivated by higher education institutions that promotes innovation at all levels and produce creative, critical thinking, self-sufficient, life-long learners, workers and problem solvers (Serdyukov, 2017).

Innovative Culture and Performance

Finally, the proposition links the two main variables i.e. innovative culture and performance of students. Performance and learning capability of students improve when this type of innovative culture is incorporated in HEIs. In consequence, all the above four propositions are evidences for this relationship of main variables. Result of both main variables through quantitative analysis has been provided as well. Performance of students is positively associated with the innovative culture of HEIs ($\beta = 0.642$, $p < 0.05$). Positive and moderate correlation also found between innovative culture and performance ($r = 0.569$). So, the environments of HEIs are supportive enough to implement new things, ideas and changes. This finding is supported by previous researchers also but in different contexts and sectors. In order to become innovative and successful, there must be culture and climate to nurture innovation and creativity in institutions (Ahmed 1998). To support the development of the innovative culture is significant goal of HEIs in modern society.

In different organizational settings, the variables of this study were used but results obtained are similar. Some characteristics of innovation link positively to performance of organizations (Danneels & Kleinschmidt, 2001; Gopalakrishnan, 2000). Technical and administrative innovativeness showed improvement in organizational performance (Subramanian & Nilakanta, 1996). Relationship of learning characteristics of organization with innovation, change adaptation and performance are evident (Kontoghiorghes et al, 2005). Certain factors (as participation, communication, time, cost and quality) are responsible for culture of innovation and performance (Johannessen & Olsen, 2011). Climate supportive for innovation, enables the development of new products and services. Culture of risk taking enhances innovation and positive attitude for change and provision of infrastructure to create platform for innovation (Per Laegreid et al., 2009; Clegg et al., 2008). Loof and Heshmati (2006) showed in their study the relationship of innovation and firm performance.

Performance Indicators of study

Different dimensions discussed earlier in operationalization to measure the performance of students. These are trust, commitment, interest and recognition. When these were asked from students in interviews; they responded that different factors (discussed in analysis chapter) are responsible for increasing and decreasing the level of these dimensions. If these (dimensions) are provided by HEIs then there is correlation with performance of students as shown in the correlation matrix (Table 8). Literature survey showed that there is relationship between trust and performance of organizational employees (Tzafrir, 2005). Also the link between commitment and performance of organizations along with some other determinants has studied (Engelberg et al., 2011). Additionally, students' performance and success is shown to be dependent on intrinsic motivation as that of interest development (Butler, 1987). Finally, evidences are mentioned in literature about the relationship of recognition and performance i.e. recognition leads positively to performance (Chuanren, 1996; Ke, 1996).

Performance and learning capability of students improve when innovative culture is incorporated in HEIs. In consequence, all the above four propositions are evidences for this relationship of main variables. Result about relationship of both variables through quantitative analysis has been provided as well. Therefore, the environments of HEIs are supportive enough to implement new things, ideas and changes. This finding is supported by previous researchers also but in different contexts and sectors. In order to become innovative and successful, there must be culture and climate to nurture innovation and creativity in institutions (Ahmed 1998). To support the development of the innovative culture is significant goal of HEIs in modern society.

Conclusion

Universities play an important part in creating, developing, polishing and exhibiting the skills of students. However, creative minds always show breakthrough performances in the form of latest technologies to the well-developed governance system. But are the universities realizing this and performing as expected from them, is however needed to explore here. Although culture of every institution and every society differs but what the positive qualities are of culture that contributes towards the development of human beings.

Keeping all these points in mind, the present study was an effort towards analysing the culture especially innovative culture of HEIs of Lahore, Pakistan. For this; three public sector, one semi-government and two private sector universities were selected. Analysis of existence of innovative culture in these HEIs was hence important for evaluation of students' performances. It also determined the positive and negative points persist in these institutions.

Multitude of advancements and improvements had been done by HEC in HEIs since its establishment in 2002. However, it's mandatory to mention that in recent years, improvements are to a larger extent as compared to past.

Hypotheses were made by linking the dimensions of innovative culture with performance to estimate the impact of innovative culture, if any, on the students' performance. Earlier in discussion of research findings of both quantitative and qualitative approaches, it was revealed that there is positive influence of innovative culture of HEIs on the performances of their students ($\beta = 0.642$) but there are also other factors or variables responsible to affect performance ($R2 = 0.324$) that are not the part of this research. All the five proposed propositions are also supported to somehow greater or lower extent but do matter for this analysis. Through qualitative (in-depth) responses of students, the propositions are accepted with evidences provided by students and their viewpoints.

Appropriate resources are provided to students by HEIs as the requirements of specific course. But it depends on the student that how much he/she takes advantage of those facilities i.e. labs, libraries, seminar rooms, etc. Student's motivation is found to be an important determinant for effective study. Role of teachers, institution's environment and student itself have played important part towards enhancing motivation. Attitude of risk taking is proved to be acceptable in some cases but not others. When any new idea is suggested then there may involve some risk that whether its implementation would be beneficial or harmful. So, this opportunity is provided by most, but not all, HEIs to its students and they are availing it according to their interests. Leadership is to influence the thinking of students towards the right way. It is mandatory that faculty members may become leaders to properly guide the students. This aspect is somehow successfully enlightening by HEIs.

Recommendations

- Allocation of increasing funds to HEIs by HEC for implementation of advanced technology, provision of more facilities to students and upgradation of system & faculty members.
- Separate computer labs and electronic libraries for students of M.Phil and Ph.D.
- Create link of HEIs to the Industries/ Professional Institutes with the help of HEC to provide practical training to final year students of professional studies that may benefit them in future and long run.
- Provide leadership training to every HEI and to every level of faculty starting from VC level (who is the representative head of every institution) to the lecturers (who directly give lectures to students).
- Recognition to the best performers in the form of giving rewards, certificates and specially praising for their outstanding performances. Whether they are:
    - ✓ teachers who give lectures and provide guidance & training to students
    - ✓ students in displaying innovative projects and getting high or top grades
    - ✓ any other staff for providing services by working very hard and ensuring benefits for institution.
- Practical training must be provided to students but by promoting team work because diversity of thoughts can display a beneficial outcome or innovative idea.
- Moreover, intra-departmental collaborative studies among students should be promoted to get knowledge related to different aspects. For instance, engineering students can work in alliance with finance students to manage between cost and technological innovation hence making a successful and economic project.
- Tolerance of failure must be practiced by every HEI with the support of HEC so that students can fully show their talent in participating to national level contests by displaying their innovative ideas and projects.
- Training must be provided to teachers as an opportunity for them in interaction to teachers relating to other disciplines.
- Workshops must be conducted in universities on regular basis for idea generation.
- Important point can also be the curriculum taught to students that must be revised according to the growing needs and for the development of students because “Today's Curriculum Tomorrow's Nation”.

Limitations

- This study focused to educational sector so innovative culture of just HEIs is analysed which may not be applied to other sectors.
- All fields of study were not considered in this research and students were belonged to some selected departments mostly because of limited time and sources.
- For proper investigation of innovative culture of HEIs, there is a need to take views of faculty and administrative staff also but this study is limited to students’ viewpoints.

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