COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE

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The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Department of Education, Faculty of Social Sciences for acceptance:

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Candidate of Master of Philosophy at National University of Modern Languages, Islamabad do hereby declare that the thesis "Comparative Analysis of Universities with Reference to Creative Climate" submitted by me in partial fulfillment of M Phil Degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it should not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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Dated: June 2021

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Signature of Candidate

Samreen Anwar

Name of Candidate

DEDICATED TO MY MOST LOVING PARENTS

AND TO My BELOVED BROTHER

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ABSTRACT

Thesis Title: Comparative Analysis of Universities with Reference to Creative Climate

The study was conducted to compare universities with reference to Creative climate. The prime objectives of study were:1) to compare the public and private sector universities with reference to creative climate,2) to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, 3)to compare different universities with reference to creative climate and 4) to compare different universities with reference to creative climate dimensions(idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness). Quantitative survey research approach was applied on study. The population of study consisted of all the faculty members of Social Sciences and Management Sciences from public and private sector universities located in Islamabad. Proportionate stratified sampling technique was used to select the sample of 299. 243 faculty members from public sector universities and 56 faculty members from private sector universities were taken as a sample of study. Public and private sectors were considered as the two strata of the population. The researcher developed Creative Climate of Universities Questionnaire (CCUQ) in the light of Ekvall's Creative Climate model which was validated by the experts from the field of Education. The questionnaire's reliability was analyzed by Cronbach's Alfha Reliability method (.918). Data was analyzed by mean, Standard Deviation, Mann Whitney U test, ANOVA Post Hoc(Bonferroni) test using Statistical Package of Social Sciences (SPSS). It was concluded that there was no difference between public and private sector universities with reference to creative climate. The findings of the study also revealed that there was no difference between public and private sector universities with reference to different dimensions of Creative Climate. A significant difference was found among different universities with reference to creative climate. Universities varied significantly in terms of different dimensions of creative climate including; Idea time, challenge, idea support, conflict, debate, playfulness/ humor, trust/openness and dynamism/ liveliness. It has been found that the climate of different universities is moderately creative and hence those universities with comparatively lower level of creative climate may have consultation with those universities which have higher level of creative climate for improvement of their climate.

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Series No		Short Form
1	International Islamic University	IIUI
2	National University of Modern Languages	NUML
3	Bahria University	Bahria
4	COMSATS Institute of Information Technology	COMSATS
5	Federal Urdu University of Arts, Sciences & Technology	FUUAST
6	Quaid –i-Azam University	QAUI
7	Capital University of Science & Technology	CUST
8	Foundation University, Islamabad	Foundation
9	Riphah international University	Riphah
10	Air University	Air
11	Standard Deviation	SD
12	Statistical Package of Social Sciences	SPSS
13	Creative Climate of Universities Questionnaire	CCUQ

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

The attitude, feelings, emotions and behavior of any organization characterize its climate. It contains various aspects of psychological atmosphere. A creative climate provided- royal road to individual give their best facilitates and outcomes that are creative in the organization. According to Lekovic and Maric (2016), creative climate elucidates creativity imagination and innovation and novelty which fostering creative and diverse approach, behavior and concepts incorporating, improving and utilizing (Fomujang and Tassang, 2018). Their diverse characteristics and different dimensions of creative climate consolidate the creative climate of the institutions. The perspective of creative climate, which leads to creative and innovative behavior of the organization(Fomujang and Tassing, 2018).These dimensions are: challenge, freedom, idea support, trust/ openness, dynamism/liveliness, playfulness/ humor, debates, conflicts, risk taking, idea creation, time, challenging work, supervisory and organizational support, freedom, work group support, sufficient resources, professional inclinations, workload pressure and organizational obstacles.

A creative climate of the institutions fosters creativity, productivity, professional development and competence among the employees. The creative climate and performance are deeply rooted. Creative climate of an institution is a prime harbinger of creative product. The organizations which have creative climate inculcate confidence and diligence to their staff to bring new ideas

and innovation in organization. When the creative climate confers chance upon employees to bring creativity, this drags organization to the vortex of success.

University is a pivotal organization of society as it is the alma-mater of all professions. Universities are the central-stone of a society which polished, trained and injects professionals into different organizations. Under the benediction of universities particular skills and potential have been developed which are chiefly important for direct entry into job market (Pachucki, Lena and Tepper, 2010). These professionals, which are the sweet fruit of universities, contribute to the success of organizations. Faculty members of universities play a magnificent role in shaping individuals into skilled and competent professionals. No one can blink the fact that Universities need highly competent and talented staff for the creation of potential and competent young professionals. .

In a modern era creativity, critical thinking, analytical wisdom, problem solving and conflict resolution are essential elements of teaching faculty, and these elements are called 21st Centaury–Skills. Teacher must be brimful of 21st Century –Skills in this paradigm of global competition and meritocracy. To compete and to sustain globally, teachers must have 21st century skills. Teacher as a central-pillar of teaching and learning process, therefore it must have to be up to date. Only a teacher can play a mediator role in learning (Panev & Barakoska, 2015).Teacher has also a refulgent role in the flourishing and nourishing of students. These 21st century skills are primordial for teachers to inculcate students with global standards (Sulaiman & Ismail, 2020).

Universities are stepping-stone for the society which is essential for personality development, socialization and grooming of young professionals. Having creative climate universities can produce creative personalities. Universities with creative climate bestow student with freedom of expression and thought and perspicacity. Creative climate of universities provides freedom to

faculty members to share knowledge and information without any resistance. The sharing of ideas, knowledge and information of different individuals create trust between colleagues, which is the important characteristic of creative climate. When the faculty members find trust in organization, they feel safe to taking risk for creative process. The employees, who get trust in organization, consider their organization safe and more enthusiastic to take risk (Yu, Mai& Dai, 2018).

Individual's motivation depends on the surrounding where they live or work. A liveliness climate of university motivate faculty towards creative ideas. When the faculty brings creative ideas with trust in a creative climate then automatically debate will be there on such ideas. In debating climate different perspectives on idea heard. When the faculty get support in the climate of universities and practice job satisfaction then they tend to become more energetic in their tasks.

Challenge and involvement is the degree to which people are engaged with daily operations, long terms goals and vision of organization. The work and the progress and survival of the organization are important for those organizational members who involve with goals, operations and tasks of organization. In a high challenge climate, employees are devoted to contributing to the success of organization (Iqbal, 2011).Organizational members in creative climate appreciate each other to taking initiatives for creative ideas. In creative climate student take pragmatic initiative freely and will fabricate sound and innovative ideas due to comprehensive trust in faculty members.

The work quality and competency of the staff members is the brain child of the creative climate of institutions. A creative climate of a university enhances capabilities among the staff which produce creative and competitive professionals who can better survive in this cut-throat competitive era. In this modern era universities are paying their attention towards creative

research and developments for the creative solutions of academic challenges. Creative solutions of problems may come through the supportive climate of universities. Creative climate of universities helps students to bring creativity and innovation in their respective era.

It is generally assumed that public and private sector universities may vary in terms of creative climate. It may happen that one university may be better than other universities in relation to different dimensions (idea time, risk taking, idea support, trust, challenge, conflict, playfulness/humor, debate, freedom and dynamism/liveliness) of creative climate.

1.2 Rationale of the Study

Creativity is an essential need of 21st century to compete the world. There are two different perspectives about creativity. The first perspective enunciates that creativity is individual trait on the other perspective said that organizational factors are main ingredients of creativity (Ishaque et.al, 2014). Multiple factors contribute to fostering creativity in a organization climate. Creativity can be flourished in a organization which climate facilitate it. Cheng & Huizingh (2013) elaborate that creative climate means the elements that facilitate creativity within organization. Individual required conducive climate for creativity. As an individual needs a appropriate climate that support his or her creativity (Pangsy & Sokoł, 2019).

Universities are also one of the important organizations of society, which play a pivotal role in enhancing individual's capacity to face future chances and difficulties. Universities impregnate students with skills that would prove them productive for the society in future. Therefore, faculty members require competencies to produce creative young minds. Faculty's competences flourish in a creative climate. Faculty can be productive for their students if teachers performed their tasks creatively, which is possible only in creative climate (Ghauri & Ayub, 2020). At higher level, teacher is the most glorious figure in the nourishment of student's skills. Creative climate

of universities provides a chance to bring novelty and enhance faculty member's problem solving and analytical skills. Creative climate of universities promotes understanding and enlightenment of faculty members thus it leads organization towards creative ideas which drag the institution at the pinnacle of success. In the 21st century creativity helps organization to sustain their positions in society. Therefore, it is important to evaluate the climate of universities for creativity and to identify creative climate dimensions. There are many studies held in Pakistan that evaluate the Pakistani universities climate in relation to multiple variables but there is no specific research in terms of analysis of creative climate of public and private sector universities. Therefore the prime objective of study is to compare in which dimensions public universities have creative climate or in which dimensions private universities have creative climate.

In the perspective of Pakistani society creativity has a narrow concept which emanates from individual and confined it socialization only thus the role of organization has been negligent. Creative climate of organization pays very significant role in individual creativity and innovative and productive process. The propagation of the creative climate we attain creative products .So we cannot blink the fact that creative climate has refulgent role in individual's creativity. Unfortunately, in Pakistani culture the role of organization is overlooked in individual's creativity or performance. The area of creative climate of Pakistani organizations is needed to be more explored by the researchers. As universities are the highest educational institutes of Pakistani education system. Pakistani universities are the epicenter of young professionals training institutes. Society expects from these young professionals to bring novelty. So it is chiefly important to give attention towards universities climate. Either our universities are upholding creativity through creative climate or creating obstruction in the way of creativity and

innovation. The researcher conducted this research to evaluate the comparative analysis of universities with reference to creative climate.

1.3 Statement of the Problem

Climate of an organization is one of the refulgent perspectives of study that needs to be investigated with reference to creativity. Researcher planned to assess Universities with reference to Creative Climate. Creative Climate plays tremendous part in organization performance. Creative climate of an organization provides green avenue to organization toward success. Creative climate in Pakistani universities context does not investigate properly (Ishaque et al. 2014).Therefore, the aimed at this study was to compare universities with reference to creative climate, to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, to compare different universities with reference to creative climate, to compare different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness). Universities are the important organizations of the society. Genuinely, universities provide a huge variety of outputs. Universities provide, talented, enlighten and trained young generation to society. In the context of research, they provide new possibilities while in teaching context, they characterize personalities.

1.4 Objectives of the Study

The objectives of the study are to:

1. Compare the public and private sector universities with reference to creative climate.

2. Compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities.
3. Compare different universities with reference to creative climate.
4. Compare different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness).

1.5 Research Hypotheses

By considering the research objectives following research hypotheses are formulated:

Ho1. There is no significant difference between public and private sector universities with reference to creative climate.

Following hypotheses are formulated by keeping in mind ten dimensions of creative climate

Ho2. There is no significant difference between public and private sector universities with reference to idea time.

Ho3. There is no significant difference between public and private sector universities with reference to risk taking.

Ho4. There is no significant difference between public and private sector universities with reference to challenge.

Ho5. There is no significant difference between public and private sector universities with reference to freedom.

Ho6. There is no significant difference between public and private sector universities with reference to idea support.

Ho7. There is no significant difference between public and private sector universities with reference to conflict.

Ho8. There is no significant difference between public and private sector universities with reference to debate.

Ho9. There is no significant difference between public and private sector universities with reference to playfulness/humors.

Ho10. There is no significant difference between public and private sector universities with reference to trust/openness.

Ho11. There is no significant difference between public and private sector universities with reference to dynamism/liveliness.

Ho 12. There is no significant difference among different universities with reference to creative climate.

Following hypotheses are formulated by keeping in mind ten dimensions of creative climate

Ho13. There is no significant difference among different universities with reference to idea time.

Ho14. There is no significant difference among different universities with reference to risk taking.

Ho15. There is no significant difference among different universities with reference to challenge.

Ho16. There is no significant difference among different universities with reference to freedom.

Ho17. There is no significant difference among different universities with reference to idea support.

Ho18. There is no significant difference among different universities with reference to conflict.

Ho19. There is no significant difference among different universities with reference to debate.

Ho20. There is no significant difference among different universities with reference to playfulness/humors.

Ho21. There is no significant difference among different universities with reference to trust/openness.

Ho22. There is no significant difference among different universities with reference to dynamism/liveliness.

1.6 Theoretical Framework

The present study is aimed to compare public and private sector universities with reference to creative climate, to compare the different universities with reference to creative climate. It is a quantitative study to evaluate the creative climate of public and private sector universities of Islamabad Capital Territory. The present study based on Goran Ekvall's (1996) creative climate framework. Ekvall's creative climate model was based on theory of underlying psychological processes. The Ekvall was first person who introduced the term creative climate. Creative climate as an organizational attributes, a combination of attitudes, feelings and behavior which characterizes life in organizations. Creative climate of an organization is a combination of idea time, risk taking, challenge, freedom and idea time, conflict, debates, playfulness, trust and liveliness. On the one side these ten dimensions combined together and make a climate creative, while on other hand it provide foundation to evaluate creative climate of organization. A organization can be build up their climate creative by ensuring idea time, risk taking, challenge, freedom and idea time, conflict, debates, playfulness, trust and liveliness in their organization climate. Therefore Ekvall's(1996) fundamental ten dimensions for the evaluation of creative climate of organization will be used as theoretical framework of this study.

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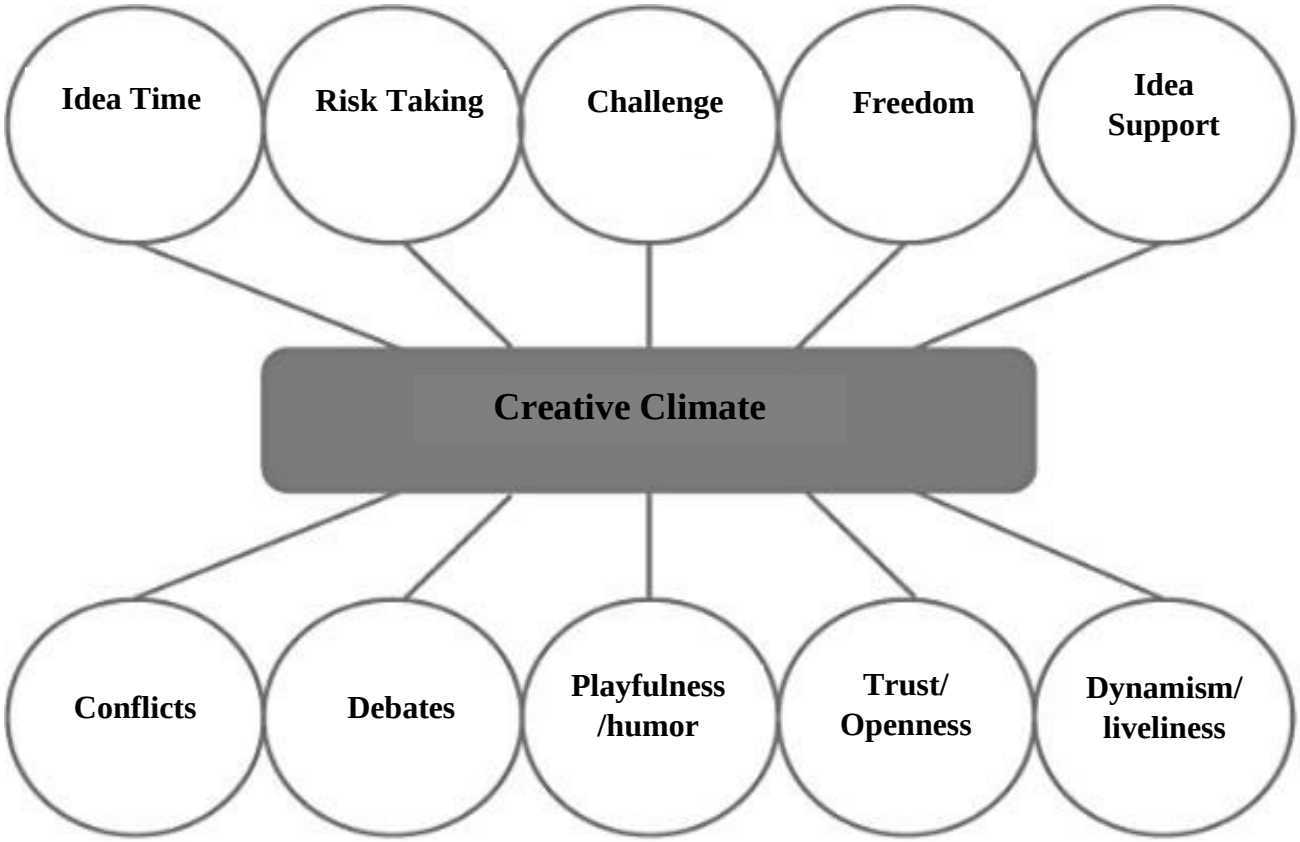

*Figure: 1.1*Ekvall's Model of Creative Climate (1996)

Source: Moultrie, J., & Young, A. (2009). Exploratory study of organizational creativity in creative organizations. Creativity and Innovation Management, 18(4), 299-314.

1.6.1 Idea Time

Amount of time individual take in elaborating new idea. Creative climate allows time to individuals for elaborating and explaining ideas.

1.6.2 Risk Taking

Giving response to opportunities in high risk and taking initiatives in unknown outcomes.

1.6.3 Challenge

Emotional involvement of employees with institutional goal and function. Workforce in a dynamic and inspiring working climate involved daily operations as well as short term and long term goals. A high challenging work climate motivates individuals to contribute their interests and energy in organization.

1.6.4 Freedom

Independence of individual's behavior in organization. In a creative climate is giving individual autonomy in their work and goal .with reference to universities climate gives faculty freedom to exploring ideas and opinions for bringing creativity in organization.

1.6.5 Idea Support

To what extent a new idea is positively taking. Creative climate of organization encourage individual's new ideas are encouraged and treated with respect.

1.6.6 Conflicts

The presence of personal, interpersonal and emotional tension. Organization which has creative climate mostly found contradictions between employees about new and creative ideas.

1.6.7 Debates

The exchange of viewpoints about new idea. It is the expression of ideas, thoughts and exchange of viewpoints about new elements within organization. Organizational climate provide interactive environment to their staff for innovative ideas and creativity.

1.6.8 Playfulness

The impulsiveness and effortlessness that is displayed. A creative climate organization has the ability to provide a relaxed and positive atmosphere to individuals to work freely.

1.6.9 Trust/Openness

The open, straightforward communication and emotional safety in the relationships. Individuals have freedom to communicate their point of views and values openly and deeply.

1.6.10 Dynamisms/Liveliness

The full of positive atmosphere and eventfulness life in organization.

1.7 Significance of the Study

The outcomes of this research would be resourceful for stakeholders including faculty members, students, policy makers, educationist and administration. The youth is the architect of the destiny of every nation. Creative climate of university enhances faculty self-confidence to take initiative for creativity. In a creative climate university, communication between faculties for the creative solution of problem brings qualities like trust, openness and freedom in organization. Students are the direct stakeholders of educational setup; the whole educational setup revolves around students in the society. When the faculty will focus their attentions towards creativity then eventually it will become student's quality. The research will sensitize the students about the importance of creativity in the universities. The findings of this study will help universities management to plan activities for faculty members in organization for enhancing organizational creative climate. This study will be helpful for policy makers to focus their attentions towards organizations and enable organizations to become creative.

1.8 Research Methodology

Quantitative research approach with descriptive survey design selected for comparative analysis of universities with reference to creative climate. Descriptive survey design is follow by researcher as its relevance for the purposes of this study. Statistically procedures like mean, standard deviation, Mann Whitney U test and ANOVA Post HOC (Bonferroni) used to achieve the objectives of this study.

1.8.1 Population of the study

All the faculty members (Social Sciences & Management Sciences) of public and private sector universities located in Islamabad Capital Territory are the population of this study.

1.8.2 Sample of the study

Sample of the study is selected through proportionate stratified sampling technique. Two hundred and ninety nine university faculty members are taken from two strata (public sector & private sector).

1.8.3 Instrument of the study

The questionnaire is developed to compare the public and private sector universities with reference to creative climate. Questionnaire is developed in the light of Ekvill's creative climate ten dimensions. The questionnaire is go through the pilot testing phase before applying on actual sample. The validity of research questionnaire is checked by the experts.

1.8.4 Data collection

The data was collected through questionnaire. Researcher personally visited to the targeted public and private sector universities

1.8.5 Data analysis

The collected data was analyzed by mean, standard deviation, Mann Whitney U test and ANOVA Post HOC (Bonferroni) through SPSS. Data was interpreted in tables and graphs.

1.9 Delimitations of the Study

Due to time and resource constraints the study delimited to:

a) The faculty members of Universities of Islamabad Capital Territory concerned with the faculty of Social Sciences and Management Sciences.

b) Only seven public sector universities(International Islamic University Islamabad, National University of Modern Languages Islamabad, Bahria University ,Islamabad, COMSATS Institute of Information Technology Islamabad, Federal Urdu University of Arts, Sciences & Technology Islamabad, Quaid –i-Azam University Islamabad, Air University Islamabad)and four private sector (Capital University of Science & Technology Islamabad, Foundation University Islamabad, Riphah International University Islamabad, National University of Computer & Emerging Sciences Islamabad) universities of Islamabad Capital Territory which have both faculties of Social Sciences and Management Sciences.

1.10 Summary

First Chapter of study presents a crux of this research. The chapter includes background of the study, rational of the study, statement and significant of the study. Chapter one also comprise study objectives, research hypotheses which were formulated for conducting this research. Theoretical framework, research methodology and delimitations of the study were also part of this chapter.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

In the present scenario the perspective of cultural creativity shifted from individual to collective organizational level. An interactions model of creative behavior was introduced in organizational creativity for an individual by Woodman and Schoenfeldt in between 1989 and 1990. Creativity considered a sweet fruit of individual behavior. The three types of characteristics that have great impact on the creative situation of the organization as well as on organizational behavior are the characteristics of individual, group and organization which lead to bring out a creative product of an organization. In the Woodman (1993), the organizational creativity model stress upon individual and situation complex interaction in producing creative products or services in organization. Organizational does not mean the cumulative of individual creativity inside organization. Organizational creativity is a collection of individual creativity within organizational setting which is according to their goal and strategy. Rhodes (1961) introduced a holistic perspective of creativity through a model which is called 4P model which consist of the terms creative person, process, product and press, which also consist of characteristics of environment. Most of the developed and developing countries pay heeds to all levels of education including primary, secondary and higher level. According to Yamamoto (1975), for

the development of creativity, higher education has been one of the important frame works and higher education must be given keen importance on developing the creative skills of both teachers as well as students.

2.1. Creativity

Creativity can be define as the ability to deals new perceptions, create new and significant ideas, disseminate new notions and come up with proper solution to hardly define difficulties (Sternberg& Lubart, 1999). According to the concept of Amabile (1983), creativity can be define in term of ability which means to generate idea that is new as well as original and unexpected but also appropriate which needs to be useful ,accommodative adaptive to task limits. Creativity considered as an opportunity of proliferating and attaining new ideas, knowledge as well as new dimension. According to Etelapelto and Lahti (2008), creativity is a green avenue to provide new frame work of knowledge, in which creativity development in a groups provide new ideas, elaborated wide ranging critical dialogue about the idea, through this group dialogue helps in constructing wide new conceptions of ideas.

Creativity is more specifically define and enunciated by Gyarmathy (2011), in terms of process and define that it's a process in which characteristics of thoughts divides into complete new style and somehow few and far between comes into actuality, as well as creativity is a method of action in which person try to ignore repeated actions, bears these actions and also try to find a ways of uncertainty, lack of confidence and ambiguity that might work for as a foundation for a new instruction. According to Robinson (2009), creativity is process of having in an actual idea that has some values and involves putting someone imaginations into practical work and making something new. Explaining the term "creativity" Frederiksen and Knudsen (2017), argued that it is the reflection of ideas about developing new services and product. According to Anderson et al

(2004), creativity involves making of useful and new ideas on the subject of facilities, products, measures and process and also encompasses afresh generated ideas to be applied. Creativity enabled the people to solve their social, cultural, political, doctrinal and economic problems (Simona and Savvas, 2012).

Creative work behavior anticipates taking along some advantages to the organization and it involves a clear practical elements (Jeroen & Deanne, 2007). According to Ahrweiler and Keane, (2013), creativity is chiefly significant to bring innovation and novelty and conducive to individual and organizational growth. To improve innovation and consequently technology in the organization, the researchers Safa and Rafeet (2016), focus on the importance of the evaluation and improvement of creativity in the organization. But another researcher argues that an individual mostly with high creativity always does not show high innovation (Ella, Miriam & Eitah, 2004).

According to Sandri (2013), creativity helps people predict and implement replacements practices to position. According to Low (2016), creativity is not limited to certain groups of people or certain gifted people but it can be seen in a single idea held in two conflicting structures of situations. Creativity is not confined to certain ages, it can be developed both in young as well as old aged peoples. A researcher stated in his article that even in older aged people creativity can be developed by practicing certain activities, teaching practices and methods, motivation and certain procedures that will help to enhance creativity in them (Vidal, 2013). According to Etelapelto and Lahti (2008), creativity can be developed through creative learning- environment and creativity development as well as can be influenced by creative learning environment, which means a new employee's may debates the solutions, discusses and exchanges new ideas and final comes into mutual understanding finding.

Organizational creativity mechanisms can be defined as the established principles and procedures that are followed by organization in order to increases and inspire ideas or results which are new and effective (Bharadwaj & Menon, 2000). Csikszentmihalyi (2009) developed a new model which helps to explain the organization creativity by using a systematic approach. According to his model (DIFI), organizational creativity appears as a result of the collaboration among persons that has knowledge setting and having its own procedures and rules in the organization and field that set the structure for the knowledge setting having principles and rules and also decide on the creativity that is effective for the organization.

2.2 Climate

Climate is a variable, which is determined by organizational and psychological processes, that affects the organizational performance. Before discussing and understanding the concept of the organization or university creative climate, we will have to define what's climate. According to Venkatesh (2019), climate can be define as the natural sense to the average progression or state of the weather at some habitation for a period of years or less as shown by temperature, wind, velocity and precipitation. According to Mathisen and Einarsen (2004), that climate educations study peoples observation of or understandings in their instantaneous work environment with references to different proportions such as support and self-sufficiency. According to the research study of Samuel, Katrina and Michael (2007), that the results of different studies show the important of climate in three prospectus first one is creative people (individuals demonstrating the persons qualities related to creative accomplishment give the idea particularly responsive to climate factors), second is climate perceptions, at both the individual and group level, have been set up to be actual analysts of creativity and innovation and the third one is the

climate assessments have delivered a basis for organizational involvements that have verified beneficial in improving creativity and innovation.

Watkin and Hubbard (2003), define climate as the observation of individuals about measures that employees identify from the environment regarding the work that how work is done. A team of researcher Scott, Lauer, Ekvall and Britz (2001), defines the climate in two different ways, psychological climate and organizational climate, the psychological climate which is related to the individual level that the climate concept only discusses to the perception of array of activities of the individual. While the second one is the organizational climate, which refers when the psychological climates are grouped or when they are combined regarded as shared actions at the work groups.

A flexible climate that promotes motivation and job satisfaction within employee is a major issue of management. Climate has a steep impinged on individual motivation. Climate fosters the inclination and motivation of employee towards job task, creativity, innovation and high productivity. Hunter and colleagues (2007), explore that climate is analyzed by Lapierre and Giroux through using the organizational learning and dispositional models. According to the Rahman (2016), the climate is direct relation with innovation and competition in the organization, the more climate toward innovation, the more organization becomes innovative and competitive and vice versa. Features of the group may also adequate the association between climate and directories of creativity and innovation. Based on the above point a study was conducted whose finding shows that team size by affecting group process can effect climate and most probably the connection between climate and creative achievement and they further illustrate that with large teams foremost to poor climate and a weak climate and creativity relationship due to procedure loss (Curral, 2001). Howell and Boies (2005), enunciated that the

other factors that are effect the effective group process are the trust and unity. Conducting studies on research and development team Thamhain (2003), concluded that mutuality and interdependence might also act as representatives of the connection between climate measures and creativity.

2.3 Difference between Climate and Culture

The refulgent researchers and people are in incessant struggle to distinguish that how climate is different from culture. Because taking both organizational climate and organizational culture is taken into same prospectus. So here is extricate that how climate is different from organizational culture. Differentiating briefly organizational climate from organization culture Martin (2002), added that culture within the organization refers to the fundamental assumptions, principles and values and culture also requires deep study in a broad way of employees affairs within the organization. Again Scott and his co-researchers (2001), define that climate is observable.

According to the differentiation of Gray (2007), between climate and culture and stated that climate is refers to the feeling of the employees that he get from inside the environment while culture can be refers to approaches from outside the environment and as a group understandings.

2.4 Organizational Climate

Particularly organizational climate was vehemently introduced in business community. Organization is considered is the socio-cultural perspective where peoples from different areas like science, humanity and technology combine together to work for the same purposes. For the organizations its' also impossible for them to select same type of people and different types of technology, that's why organization differ in their features and environments. As Fidan and Ozturk (2015), elaborate that due to climate organizations differ from one another. Organization climate which is also recognized as group climate is the process of calculating the culture of the

organization and its leads the concept of the organizational culture (Das, 2017). He further added that organization climate is the set of features that is observed by the staff either directly or in indirect way about the environment in which they are working, that is supposed to be a major force inducing workforce's performance. Researcher also stated that organization climate can be considered is the intrinsic environment of the organization, which has major impact on the motivation, total workface as well as on the productivity of the employees. He argues that organizational climate can also be a major factor that is responsible for the job satisfaction and dissatisfaction of the workforce and in return it can affect significant employees business and satisfaction.

The author Venkatesh (2019) stated that in the organization "organizational climate" can be a situation element or environment determining element of the organization which can affect the human action. The author Venkatesh (2019), further elaborate that most of the people mix both the terms organizational climate and organizational culture and considered it's interchange but there are some elementary differentiate between the organizational organization culture and organization climate. The authors James et al. (2007), tried that how organizational culture is different from organizational climate and define that organizational culture is interlinked with the nature of faith and expectations of the people about the organizational life but organization climate is refers to the display of these beliefs and expectations and weathers these are being satisfied or not. The researcher Venkatesh (2019), stated that climate of an organization is to some extent same like personality of individual, the way every person personality is different and unique from the personality of other person the same as every organizational climate is different from the climate of other organization. Researcher further argue that organizational climate mirrors an employee observation about the organization for which he is working and

organizational climate is the sole physical appearance and features that are observed by the staff about the organization in which these employees are working and which work for as a major strong point that influences these employees behavior.

Organization climate was succinctly elucidated by a Skyler(2020), and also explain that how organization climate change and describe that organization climate is the observation of the environment, both by the people outside of the organization as well the employees working for the organization. She further added that organization climate can be changed by diverse and multiple factors and prospectus, climate can be shaped be the boss and refers as well as that it can also changes the event that take place in the work place or by the individuals who can work in the organization and how these individuals respond to the things in the organization and if the new managers comes the climate may change slowly over time or due to an unforeseen situation climate may change quickly for example the death of an employee.

There are multiple factors or variables that contribute towards the organizational climate. As Latwin and Stringer (1968), gives nine variables that contribute or through which organizational climate can be assessed (Yoo and Huang, 2012). The variables are these: structure (its show observations about the level of organizational boundaries, commands, principles and red tape), responsibility of the individual (feeling of autonomy of considering himself is the boss), rewards(feelings about the fair reward system, suitable rewards and have confident and satisfied about the reward), risk (its show perceptions about the level of challenge and risk that employees can face in the working conditions), warmth (good, friendly and informal work group climate in the organization),support (feeling of general accepted and supported by the good companionship and helpfulness usual in the working situations),conflict (its show the level of confidence that the climate can bear in opposite opinions and view).

The researcher Das (2017), threw light six factor that can affect the organizational climate, and stated under; first one is the organizational structures (Ideas on the degree of organizational limitations, instructions and principles), second one is the responsibility of the individual (having a understanding of self-competence of being one's individual boss), third factor is the reward (equal rewards to distinguish performance), fourth factor is risk and risk-taking (the degree of challenge and risk with which the employees are going to withstand), fifth ones is friendliness and support (feeling of overall highly regarded corporation and effectiveness dominant in work setting) and the last one is the patience and conflict (level of declaration that the climate can have patience to withstand with opposite ideas).

2.5 Dimensions of Organizational Climate

There are multiple dimensions that contribute as a building- blocks of climate. The climate dimensions are responsibility, reward system, leadership trait, employee's participation in work, honesty, structure and administration (Riyanto and Panggabean ,2020). Litwin and Stringer (1968) give nine dimensions of climate through which a climate can be analyzed (Yoo and Huang, 2012). These dimensions are: risk, support, responsibility, reward, affection or warmth, structure, conflict and standard.

2.5.1 Structure

Structure refers to organizational rules, regulations and procedures that are execute in the organization (Riyanto and Panggabean ,2020). Is there an importance on to going through channels or loose and informal atmosphere in the organization (Yoo and Huang, 2012). When employees feel inflexible organizational rules and procedure it affects the level of their engagement in the organization. Employees feel annoyed in their work when they found rigid rules in the organization (Ahmad et al, 2018).

2.5.2 Reward

Reward assumed as the individual feeling's regarding reward for performing good job (Yoo & Huang, 2012). According to Ahmad et al, (2018) reward is fulfilling employees emotionally and financially. According to Abubakar and Isa(2019), combination of tasks and behavioral competency defined reward system of organization. When employees find honest reward system in their organization then the employees feel motivation to engage into organizational goals, tasks and mission. As Clement and Eketu (2019), state that an employee does not engaged in organization when they found unjust reward system in their organization.

2.5.3 Responsibility

Responsibility refers to emotions and sentiments of the individuals which they are bestowed upon one's boss or supervisors, confidence on their decisions and owner their jobs when it given (Yoo and Huang, 2012). Employees in a high responsibility organization can effectively calculate that what is best for organization (Ahmad et al, 2018).

2.5.4 Support

Support is the degree to which individuals feel that their colleagues, subordinate and managers associative and supportive to them (Ahmad et al, 2018). Support in organization refers to employee feel and get support from their colleagues, subordinates, supervisors, lower, middle and upper managements. As Yoo and Huang(2012), explained that a shared support that employees perceived in full hierarchy of the organization.

2.5.5 Conflict

Employees getting feeling that multiple point views are welcomed or encouraged by management in organization (Yoo and Huang, 2012). The focus of the organization on openly discussed problems, dealing with divers views instead of covering or discouraging conflict.

2.5.6 Standards

Standards refer to the degree employees supposed the importance of Implicate and explicate goals and performance standards in organization (Yoo and Huang, 2012).

2.5.7 Affection or Warmth

The employees' feels affection presents in the workplace of organization. Employees feel connections with jobs, colleagues, work groups, departments and organizations (Abubakar and Isa, 2019)

2.5.8 Risk

The awareness about that is risk presence or absent in organization and the focus of organization on which side: is organization encouraged taking risks or taking themselves in safe side (Yoo and Huang, 2012).

2.5.9 Identity

Identity means feeling of employees that you are a good and important member of group and organization. Employees feel that they are pride and future of organization.

2.6 Effects of Organizational Climate on Employees

Discussing the influence of organizational climate on the human performance Das (2017), stated that when the organization climate is feasible for the employees then he get motivated and his performances is increases up to the expectancy of the organization as a result the employees is

satisfied from the job that decreases costs. He further stated that organizational climate has direct relation with the work environment of the employees, further illustrates that attitude and satisfaction of the worker of the organization has direct effect on the performance of these worker as well as on the organizational climate too. Based on the performance of the people he further added that employees whose are working in consistent working climate has more expectable performance than those whose working in inconsistent working climate which means that unpredictable and changing working environment of the employees has negative impact on the organization productivity and different unpredictable organizational climates may show different results and have impacts not only on employee's motivation but as well as on satisfaction and attitudes of the employees too.

According to the finding of research study of (Xiaofu & Zebing ,2015), conducting research study on the "effects of administrative climate and interpersonal climate in university on teacher's mental health" through self-developed questionnaire, result revealed that between the health of teachers as well as administrative and interpersonal climate has a significant relationship. They further stated that for development of mental health of the teachers, administrators and educational specialist might focus on the construction of power in the university that can promote the culture and positive organizational climate.

A research study conducted by Khan (2019), entitled as , the impact of organizational climate on teacher's commitment. She found that there was positive relation between some of the organizational climate such as collegial leadership and academic achievement and also found that there was negative relation between institutional vulnerability. She further explain that for enhancing the academic sublimity of the organization, then managements and principals of the

organization will have to take necessary attempts to consolidate the positive organizational climate.

As stated above by the researchers due to the major impact of organizational climate on the motivation of the employees as well as on the job satisfaction of individual employee, it put high level of impact on the performance of the employees working in the organization. The satisfaction and dissatisfaction of employees can be determined from the organizational climate because it determines the work environment of the employees. As researcher Nageshwar Das (2017), stated that performance of the employees and organizational climate is having direct relation, so it means it can be stated that organizational climate and efficiency of the performance of the employees is having closed relationship with each other's.

According to Acikgoz and Gunsel (2016), to increases the ability of problem -solving and to increases the productivity and competitiveness of the organization, organizational climate might be improved to bring creativity and innovation which help these. According to the finding of Berberoglu (2018), which revealed that organization climate is significantly related with organizational commitment and perceived organizational performance. He further added that when organization climate is positive then the organizational commitment is high among the employees.

Organizational climate has an important role in (employees) faculty members' performance working in educational institutions. The individuals (faculty) performance affect in adverse and discouraging organizational climate (Asio, 2020). The researcher finds out the positive relationship between faculty members and organizational climate.

2.7 Creative Climate

In only the last ten or fifteen years organizations have been widely studied in the perspective of creative climate (Bavec, 2009). A multiple variables of organization have been identified that contributed to creativity, but mostly researchers focused on climate. Climate in the context of creativity have been described in different dimensions like: encouragement, managerial sport, work characteristics, resources, freedom, trust, openness, safety, diversity, work process and system, challenges and autonomy.

Ekvall was first person who introduced the term creative climate (Licul, & Jurisevic, 2020), and defined as creative climate is observable and repetitive form of actions, approaches and feeling that shape the life within the organization (Ystrom and Kumlin ,2015). According Cheng & Huizingh (2013) creative climate refers to the values, beliefs and norms which lead to creative behaviors. Lekovic and Mairc(2016), defined creative climate is a type of climate that care the improvement, adaptation and application of new and different methods, practices and ideas is a climate for creativity. Kirovska et al., (2017), described creative climate can be define as that climate that improves value and develops creativity within an organization, where climate is the basic characteristic of the organization and which consists of set of approaches, feelings and types of conduct that appear on a regular cooperative basis within the organizational atmosphere. Dubina(2013) defined creative climate as an the internal environment of organization where creative ideas are supported by organization.

Creative climate means the elements of the organization that facilitate creativity within organization (Cheng & Huizingh, 2013). Researchers defined different elements of organizational climate that facilitates climate for creativity in organization. Zain and colleagues (2019) claimed that responsibility, autonomy, providing sufficient time, leadership and support

by management are the essential elements which makes creative climate of a organization. According to Zhang & Reynolds (2020) work group support, challenging work freedom and organizational encouragement are elements that makes creative climate. A group of researchers conducted a research on climate for creativity and influence of different climate factors on creativity. Conclusions of their study shows that there are various types of organization climate variables that support creativity, which are ; collaboration between intra-group and inter-group, types of leaderships, structure of organization, competitions in the organization, organizational unity and many others (Hunter, Bedell, & Mumford, 2007). In simple words freedom, openness, organization or supervisor support, time, response to risk taking, challenge, conflict, debates, playfulness, trust and liveliness combined together and create a creative climate of organization, which facilitates creativity in organization. As Gisbert and colleagues (2014) also state that creative climate is a combination of these all elements.

Amabile (1996), throw light the climate for creativity or creative climate, under following some of the dimensions and these are the work group support, organizational and supervisory encouragement, freedom, challenging work and sufficient resources. Support for innovation, vision, orientation on task and participative safety elements conceder by West's model of climate conducive for creativity.

Employees get motivation while working in creative climate as a result of which can affect the productivity of the organization in a positive way. Creative climate enables individuals and teams in organization towards creation. Creative climate provides strengths to organizational capability to create creative products. Creative climate increases employee's morale, level of interest, loyalty towards organization, job satisfaction, level of productivity and creative behavior. Creative climate is important because it enhances creative abilities and provides

employee foundations for creativity within organization. These foundations are motivation and supports for generating and implementing creative ideas. In other words, creative climate of an organization is a facilitator of employee's creativity and novelty. According to Carmeli and Schaubroeck (2007) creative climate is the central element for the analysis of a organizational outputs.

Mathisen et al, (2004) defined creative climate as 'to evaluate the collaborating learning of the individual, creative climate is one of the main key indicators. while fixed learning organizational climate appears to be classified by a assurance to seeking goals, freedom and individuality concerning the selecting of duties and how the new employees are accomplished, stimulation of ideas and sufficient period of time for generating new ideas as well as getting suitable opinion, greeting and proper system of rewards for the creative effort of the employees.

2.8 Models of Creative Climate

To investigate the different drivers that contribute to the organizational creative climate, Sundgren et al. (2005) introduced "Path model of creative climate". The mode based on different dimensions which lead to the creative climate that are: networking, information sharing, evaluation/reflection, learning culture and motivation both intrinsic and extrinsic motivation. This model shows the relations ship between these different drivers that lead to creative climate.

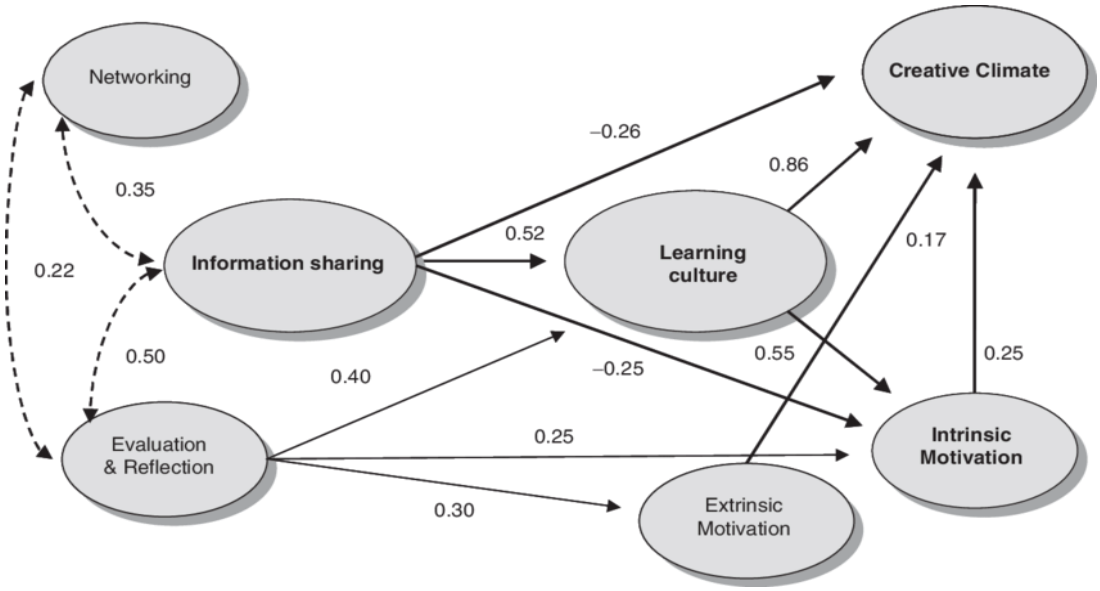

Figure 2.1: Path model of creative climate (Sundgren et al. ,2005)

Amabile(1997) gives a componential theory of organizational creativity, in which she elaborates that the organizational creativity is the combination of individual/team creativity and work environment (Moultrie & Young,2009). The model is divided into two parts which are work environment elements and individual or team creativity elements. Individual's elements expertise, skills and intrinsic and extrinsic motivation interacts with each other on creative activity (Ramos, et al, 2018), and work environment elements: resources, management practices and organizational motivation combine together towards innovation (Moultrie and Young, 2009)

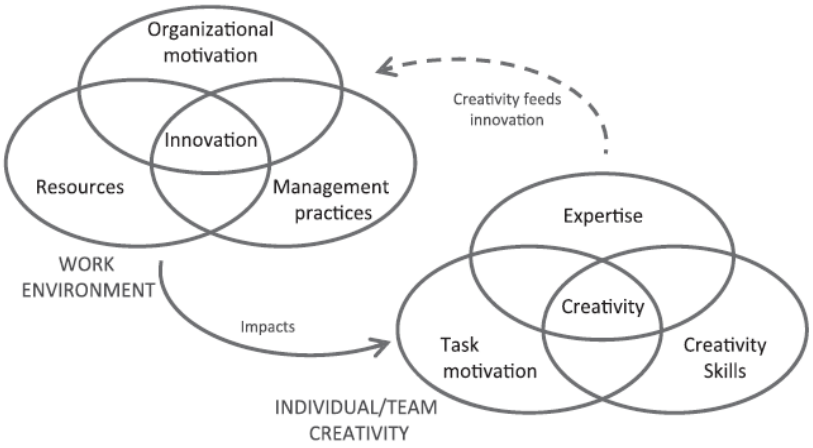

Figure: 2.2 Amabile's(1997) Componential Model of Organizational Creativity(Moultrie &Young, 2009)

2.9 Ekvall's Creative Climate

Ekvall contributes to measure creative climate of organization. Ekvall (1996) introduced "creative climate" term and defined as creative climate as an organizational attributes, a combination of attitudes, feelings and behavior which characterizes life in organizations(Ismail, 2005;Samuel, Katrina, & Michael,2007; Iqbal, 2011;Beheshtifar,2012;Alias, Ismail, Alia & Omar, 2019;).

Ekvall(1996) introduce creative climate model(Nasurdin, Ling, &Hou,2014; Licul,, & Jurisevic,2020).Ekvall's creative climate based on ten dimensions. The dimensions of this model are idea time, challenges, risk taking, idea support, debates, conflict, trust playfulness/ humors and dynamism /liveliness. Creative climate of a organization is a combination of these ten dimensions.

2.10 Dimensions of Ekvall's Creative Climate

2.10.1 Idea Time

Amount of time individual take in proliferation of new idea. Creative climate allows time to individuals for elaborating and explaining ideas. A creative climate organization gives a flexible timeline to their employee for thinking, exploring, sharing and discussing a creative idea. A creative idea needs an appropriate time to think about it and to implement it. On the other hand the employees, who do not have time in their busy schedule, prefer to accomplish their tasks instead bringing creativity in their work. Ling and Yan (2015), stated that flexible timeline provide opportunity to individuals to bring multiple different and creative ideas.

2.10.2 Risk Taking

Giving response to opportunities in high risk and taking initiatives in unknown outcomes. Bold initiatives taken by the employees in the organization where risk taking is allow with open hart. A highly risk taking organizations take quick decisions about creative initiatives without any fear. These organizations give confidence to their employees to take steps for bringing creativity in their works as well as in their organization without thinking the end results of these ideas. The organizations which does not support risk taking, always keep themselves in safe side. According to Ling and Yan(2015), hesitations mostly found in the organization which does not encourage risk taking. A positive attitude of management towards risk taking, facilitate and motivate employees to take risks for creative ideas. Management willingness to take risk motivates employees to bring creative and practical ideas (Sherief, 2019).

Risks are very important at organization level. Calculated risks are always to be taken at some points. The effective way to take risk is with the mutual assessment of employees and the organization. Being on the same page at points is important for the effectiveness of ideas, new decision should be taken with the help of mutual agreement. Azeem et al (2019), stated that it is necessary to permitted the individuals in organization for taking moderate risk in the finding solutions of their work problems.

2.10.3 Challenge

Challenge is a sentimental involvement of employees with institutional goals and functions. Challenge is the degree to which the individuals of organization involved in daily operation, goals and vision of organization (Isaksen & Ekvall, 2010). A high challenging work climate motivates individuals to contribute their interests and energy in organization. In a high challenge climate, individuals feel pleasure and fervent to contribute their energy in their organization (Ling & Yan, 2015). While on other hand the absent of challenge, people does not feel motivation towards jobs and organizational daily goals and operations.

2.10.4 Freedom

Freedom is tremendously importance to peruse creativity and innovation. The degree of independence presented by individuals in their organization called freedom (Isaksen & Ekvall, 2010). In a creative climate is giving individual autonomy in their work and goal. A organization having creative climate gives faculty freedom to exploring ideas and opinions for bringing creativity in organization. In organization freedom means giving autonym to individuals to accomplished their tasks in their own styles. Individual freedom in organization includes, freedom in sharing information, discussing alternative

ways, making and implemented ideas (Ekvall, 1996). Freedom in organization to plain their own work goals and do their work in alternative ways instead rule of thumb, enhanced employees confidence level. Freedom provide individuals confidence to do a work that they wants (Rabbani & Sarmad, 2018).

In an organization the employees deeply desire to enjoy some degree of freedom. Organization is always expected to give its work force freedom. Freedom of expression, freedom of planning, freedom in finding possibilities or multiple ways in their work are very important in this regards. According to Azeem et al (2019), innovation and creativity is the brain child of freedom, freedom of expression and thoughts break the oyster of stagnation and bring new ideas and productivity in organization.

Restrictions and boundaries make the environment uneasy and banal, employees need a comfort zone to express themselves freely. They always look forward to the organization at some point. Organization is responsible that it provides its employees an environment where they can express themselves and their ideas easily. The organization and the employees share the same page when it comes to the freedom of expression. The organization should make sure to safeguard their freedom.

2.10.5 Idea Support

Idea support is to what extent a new idea is positively taking. According to Ekvall(1996) idea support is the ways in which novel ideas are treated. Creative climate of organization encourage individual's new ideas and treated with respect and veneration. A positive and healthy creative climate organization facilitates creative idea of employees and encouraged them to test and implement these ideas confidently. Innovative ideas are

treated proficiently and respectfully in the organization where the creative idea supported (Ling and Yan, 2015).

In such climate where new ideas are supported and appreciated the employees work effectively. Organization with creative climate is always supports and listen the individuals who are trying to germinate new ideas and initiatives. Individuals ideas and suggestions taken in proficiently in creative climate organization (Isaksen & Ekvall, 2010).

Idea support considered as a fundamental characteristic of a creative organization. Supporting employees, accepting their opinions and ideas gives them confidence. This eventually leads to the ultimate success of organization. The employees empowered by organization brings their organization towards success (Azeem et al, 2019).

2.10.6 Conflicts

Conflict refers to the presence of personal, interpersonal and emotional pressure in organization. It is an opposite dimension of creative climate. It means that when the conflict dimension deeply rooted in a organization, individuals engaged in interpersonal warfare, professional alliances, gossips and plotting against each other (Isaksen & Ekvall, 2010). Individuals with diverse opinions, learning and working styles, emotional and behavioral differences etc, interact and work with each other in an organization. When a number of divers' individuals combine together, then automatically conflict will be there on multiple things. The organization which have creative climate, the conflict dimension scores will be low, in the opposite case, conflict dimension high score indicates that organization did not have creative climate. According to Ekvall(1996), in a creative climate individuals show mature behavior in organization.

2.10.7 Debates

It is the expression of ideas and thoughts and exchange of viewpoints about new elements within organization. Disagreement between individuals viewpoints, in highly debating climate, different viewpoints are appreciated (Isaksen & Ekvall ,2010). The individuals feel comfortable in creative climate to share and discussed their creative ideas with their colleagues, bosses, subordinates and managements in a healthy and positive debate organization. According to Isaksen and Ekvall (2010), an interactive organization appreciated individuals to share and discussed their creative ideas for feedback. An organization with enlightened and positive debating climate, encourage creative individuals to develop new ideas, plans and discussion on multiple opinions (Ling &Yan, 2015).

2.10.8 Playfulness

Playfulness refers to the effervescence, impulsiveness and effortlessness that is displayed in organization (Ekvall, 1996). A creative climate organization has the ability to provide a relaxed and positive atmosphere to individuals to work freely. Employees feel free hand and relaxed to think about a creative idea and climate that provide comfort zone to them. The climate of organization either facilitates employee creativity and creative products or may affect their performance in kind of serious characteristics present in organizational climate. As Ling and Yan (2015), expounded employee performance enhanced through creativity, motivation and team participation which are the characteristics of an organization with playful climate.

2.10.9 Trust/Openness

It is refer to the open, transparent and straightforward communication and emotional safety in the relationship. Individual feels easy to share their ideas and opinions in the organization where trust is high (Isaksen & Ekvall ,2010). Individuals have freedom to communicate their point of views and values openly. The open communication and sharing of knowledge, ideas and opinions are occur in that organizations where the employees open, honest and trust their colleagues and other whom to concerned. Trust is an essential element for sharing of ideas and information (Ling & Yan, 2015).Creativity and creative ideas can be implemented only when the pros and cons about creative ideas are discussed openly in organizations. Therefore trust is an important element for organizational creativity.

2.10.10 Dynamisms/Liveliness

Dynamism/liveliness considered as full of positive atmosphere and eventfulness life in organization. In a highly dynamism organizations tasks and events happened continuously and rapidly (Ekvall, 1996). A dynamism/ Liveliness climate of organization encourage employees for creativity. Issues tackled and resolved by individuals working in dynamisms climate of organization (Ling & Yan, 2015). In opposite the organization which have not dynamism climate, work slowdowns, tasks and events go in their typical ways.

2.11 Why Ekvall's Creative Climate Model?

The current perspective the study is aimed to compare universities with reference to creative climate. It is a quantitative study to evaluate the creative climate of our universities. Going towards the evaluating the creative climate of universities it is important to understand that what

are the indicators or elements of a creative climate. The Ekvall was first person who introduced the term creative climate (Licul & Jurisevic, 2020). Ekvall's provide fundamental indicators for the evaluation of creative climate. These indicators or dimensions are: idea time, risk taking, challenge, freedom and idea time, conflict, debates, playfulness, trust and liveliness. These dimensions provide foundation to evaluate creative climate of organization. Creative climate of a organization is a combination of these dimensions (Gisbert-Lopez, et al,2014). Creative climate is the individuals' attitude in organization towards responsibility to brings creativity and innovation (Alias et al. 2019). As Licul, & Jurisevic (2020), stated that many authors used Ekvall's dimensions as a foundation for defining the term creative climate of organizations. A number of researchers further added dimensions in it to define the creative climate. There are many complex models which have highlighted the role of climate in creativity as (Amabile 1999, Path model of creative climate by Sundgren et al. ,2005) but Ekvall's creative climate model is a comprehensive model to assess the creative climate of organization (Licul & Jurisevic ,2020). There are several studies with multiple purposes conducted which are based on Ekvall's theoretical framework (Ling and Yan, 2015).

A survey study conducted by group of researchers based on Ekvall's and Amabile creative climate models to see the important factors to creating creative climate of organization and indicating differences between the dimensions of organizational culture and organizational creative climate (Jelaca et al, 2020).

Alias and colleagues (2019) conducted a meta analysis on organizational resilience through creative climate. In this meta analysis researchers connect link between organizational resilience with creative climate dimensions. Researchers strongly suggest in their study that Ekvall's

Creative Climate dimensions (1996) are the essential for a organization resilience (Alias et al, 2019).

Zhou(2018), following the model of Ekvill's, conducted the study on creative climate in organization and finding of the study revealed that the two dimensions challenges in the organization and openness or trust among the staffs members shows higher value among the members of groups and both challenges and openness act as a motivating factor to a group climate. while other dimensions like conflict shows the lowest values and where considered negative dimensions and risk taking shows the lowest value from other nine dimensions, these two values which shows that both these two dimensions are most undesirable among the members of the group in their climate(Zhou, 2018).

Another survey research has been conducted to see the relationship of different organizations learning mechanism and creative climate depending on Ekvall's and Amabile frameworks (Cirella et al, 2016).

The researchers (Ystrom et al, 2015) conducted a case study to identifying challenges and possibilities in an organization with the help of Ekvall's creative climate dimensions. The findings of their case study indicate few challenges to handling uncertainty in the organization.

Klimoviene and Barzdziukiene (2010), assessed the creative climate of university class room for the advancement of Foreign language in their study. The creative climate of class room was analyzed through Ekvall's and Amabile creative climate dimensions. Researchers find out that creative climate of class room assist the advancement of foreign language teaching.

In qualitative study Hunter, Bedell, and Mumford (2005), introduced fourteen-dimensions for organizational climate for creativity which comprises of following dimensions: positive colleagues group, positive relationship of supervisory, clarity about mission, organizational

resources, challenges, emphasizes on product, employees participation, organizational integration, independence of the employees, social conversation on positive reality, logical inspiration, support from top level management, reward system and flexibility in organization and risk taking. In this study Hunter and colleagues (2005), combine dimensions almost from Ekvill's creative climate model and Amabile (1999), eight-dimension model for the analysis of creative climate.

The following literature indicates that Ekvall's Creative climate dimensions (1996) are still appropriate to analyze the creative climate of organizations. As the objectives of study ware to compare the public and private sector universities with reference to creative climate and to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities. So the study needs a simple and comprehensive model to conduct the research. The Goren Ekvall's "Creative Climate" model is a brief and suitable model for the purposes of research. Therefore the research was based on it. The model consists ten dimensions, includes idea time, risk taking, challenge, freedom and idea time, conflict, debates, playfulness, trust and liveliness.

Ekvall's creative climate dimensions ware taking in management area of study but now these dimensions are contributing to education sector specifically classroom creative climate have been analyzed through Ekvall's dimensions.

Argona, (2001), conducted a study in Aesthetics education settings with mainly purpose to identifying Ekvall's creative climate dimensions in Aesthetics education settings. The focus on how Ekvall's dimensions contribute to aesthetics education settings and categorizing the behaviors that are indicators of creative climate in classroom.

The research study of Peter-Szarka(2012) based on multiple theories and assessments of creativity in creative climate of class rooms. In which researcher elaborate that a class creative climate can be accessed through Ekvall's creative climate dimensions, Amabile KEYS for assessing creative work environment and TCI(team climate inventory).

Richards (2002) identifying Ekvall's creative climate dimensions in gifted education setting. Researcher observed creative class room through classroom observations and teachers interviews which was based on Ekvall's dimensions.

2.12 Obstacles of Creative Climate

There are different challenges and obstruction towards a creative climate with regard to work characteristics but among them control is one of them. According to Rasulzada (2007), most of the organizations try to find a way to cope with control which brings uncertainties in the creative process. From the above statements of different researchers and authors, it can be say that how creative climate is effective not only for organizations but as well as for the employees. But there are still some hindrances that bring gaps between creative climate and organization.

A group of the refulgent researchers Azeem et al, (2019),gives the some elements that fosters organizational creativity and some obstacles that may hurdle or unfavorable for creativity in organization. Work pressures and workload, management and colleagues support and accessibility to resources are the elements that encourage creativity in organization, while unrealistic work pressure and organizational politics are hurdles of creativity in organization (Azeem et al, 2019).

A research studies was conducted and found different results and concluded that the most common obstacles regarding creativity at university were the emotions, fears of making mistakes, fear of being criticized, expressing themselves (related to the conditions of the subject

matters and university conditions) and lack of incentive and preparation period to produce new ideas (Alencar & Fleith , 2008).

A researcher Zhou (2018), stated that the barriers that occurs to the successful creative climate includes the terror of expert, restricted working time, critical targets, have more faith in experience rather than possibly uncertain novel ideas, unproductive communication between participants, poor group management between the members of large group size, deficiency of group administrators, jobs allocated by managers, deficiency of group work skill and changing the membership of individual of the group.

2.13 Facilitators of Creative Climate

As the world become a global village, its put pressure on the organization as well as on the companies to increases their products and services and bring creativity and innovation. Most of the organization need new ideas to increases their power. To do so the administrators of the organization need to increase both efficiency and effectiveness of the creativity process. According to Zhou (2018), there are different drivers and motivating factors that helps in promoting creativity in the individuals as well as in the organizational and these drivers includes;

1. Freedom of participating in project work
2. Challenge of project task
3. Group openness
4. Trust and support between group members
5. Help from experts (professors, supervisors, or senior students)
6. Group diversity
7. Shared leadership in group management
8. Milestones and project deadline

9. Finding online information
10. Group common goal and clear individual tasks
11. Group meetings and knowledge sharing
12. Group disagreement
13. Qualified group leader

According to Russell (2015), one of the most important factor to for the world leaders to increase innovation efficiency and effectiveness is to create a creative climate or climate where new ideas are made and applicable to creative results. After analysis of 42 different research studies of different researchers, Russell (2015), concluded several factors that facilitate the organization towards creating creative climate and which were significantly show positive impact on the creative performance of the employees. The factors were:

a. Challenging Job

The challenging job means that designing the work and responsibilities that are serious, multifaceted and exciting. Yet, they must not be overly demanding or excessively irresistible. Challenging work is normally described by expertise diversity, autonomy, uncertainty, and regular fluctuations. When work challenging, employees are more enthusiastic about their job and fascinated in completing their jobs well. Managers/ administrators can encourage this aspect through work design by introducing enough density and variation into the work to keep things motivating and by making challenging objectives for the workgroup.

b. Intellectual Motivation

Intellectual motivation means inspiring open and honest argument and debate on new ideas. Creativity is additions in work environments where significant interactions take

place around important subject's matters and ideas. This type of discussion takes time, emphasis, and dealings in both formal and informal situations. To create such type of creative environment, a controversial policy might be used to create it.

c. Optimistic Interpersonal Unity

Creativity also adds in climates where staffs observe a sense of closeness and unity and the nonexistence of emotional conflict. Collectivistic beliefs that where staffs recognize more as group members working toward common goals also an increases greater positive interpersonal unity. Increasing positive interpersonal affiliations can be hard when the manager is going to inspire open discussion. It is important for the supervisor and team members to recognize the need to discussion ideas and subjects but at the same time they must be very careful that the discussion does not eat away positive interpersonal unity. Persistent to have open discussions might even help to improve interpersonal unity.

d. Trust and Safety

Research study and practice evidently expresses that a climate of trust and safety enables creative performance. Clearness does not essentially mean to tell everyone everything and it also does mean being as open as possible with staffs. It actually means that also being open but about what you do and what you don't know as well as what you can share and what you cannot share. Constructing trust also actually means that showing your trust to your employees. Creating a climate of trust needs to go beyond the boundaries of the policies as well as posters on the wall.

e. Flexibility and Risk-Taking

Promising flexibility and risk-taking mean being an easy with the ambiguity that approaches end to end with creative effort. Administrations that hold the knowledge that

was gained from mistakes have a competitive benefit over those administrations that pay no attention to these mistakes or to correct the failure. Supervisors must undoubtedly transfer through term and act that mistakes are to be learnt from the previous and these mistakes must present opportunities to learn and improve.

f. Autonomy

Providing staffs with independence in doing their jobs is another important aspect of a creative climate. Eras of research on autonomy of the employees on novelty visibly shows that a visionary wishes the freedom to be self-directed and autonomous.

g. Mission Clarity

One of the main and critical elements of creative climate is mission clarity. Mission critical is the factor that is highly influenced by the manager of the organization. Educational and practical research noticeably illustrate the significance of setting forth a clear mission and engaging creators in that attempt. The first step of the mission clarity is often called problem identification and which has been shown to be extremely associated with creative production and way out generation. Because the supervisors usually has the maximum inclusive perspective, supervisors input in problem identification is important. The second step of the mission clarity is creating mission clarity is to create perfect planned decisions that established the framework for novelty. These decisions send strong indications about the organizations' planned direction and the reasonable background. The researcher further advise that creating thirst for the mission clarity in the employees is by capturing the hearts and minds of creator is also an important part of this factor. Supervisors need to certify that pacesetters are given a clear, convincing, and ambitious mission that challenges the attention and involves the heart of the employees.

h. Marketable Stress

Endorsing a solid stability of practicality and vision is additional important feature to creating a climate for novelty. An answer that is creative but not applicable or real is of little use to the organization, put strong market stress on the organization. Similarly, some results are practical and effective but not unique also put strong market stress on the organization. So these answers might not be original but can be helpful for working for a short period of time. Hence, these answers can be easily replicated and do not represent sustainable competitive advantage for the organization in the market.

i. Resources

Just as creativity is a risky attempt, it can also be expensive. Novel employees need to observe that the organization is prepared to finance the time and money essential to backing novelty and application of these hard works. Managers need to decisively strategy for flexibility in financial plan and in time distribution to inspire improvement. Many studies have shown that an excess of resources can central to satisfaction and that some restriction of resources indicates to creativity which drives advance. This same idea grips true for time resources as the managers or administrators must let adequate time for improvement but also be able to make a appeal about when to cancel an idea that is not at this time practical.

j. 10. Leadership Support

In conclusion, novelty teams must have confidence in that their hard works are important to top administration. The creative team manager can encourage this factor significantly by helping as a channel between the team and more high-ranking management. The manager or administrator must vend the importance of creative efforts to more senior and

transfer them to the creative team. While leadership support for creativity is important generally, it is most vital in the analysis and application phases of the creative plan while resource needs become less expectable and organizational tolerance attires tinny.

The study of Denti (2013), concluded that there are different elements of the creative climate and among them were the degree of person freedom, emotional safety, support and positive relations amongst the members of the team, idea provided by administrators, creative inspiration, mission clarity, presented resources, and even enjoyment. After analyzing the meta-analytic studies (a study that has the capability to identify effects across numerous situation since they associate the result from a large number of studies) of different researchers Denti (2013), concluded six elements of the creative climate.

i. Challenge

The essential elements of the creativity are Compound of challenging, motivating jobs and goals outgrowth intrinsic motivation. Tasks and goals of organization as well as of individual or team work should not be too irresistible because then the challenge risk becoming the problem successfully close motivation.

ii. Intellectual Debate

When functioning with difficult and challenging tasks, problems often rise. Most of the people working in the organization are facing the nature of the problem is mostly new to them as well as the nature of the problem is complex for them that they can solve the problem in different ways. To make sure that the project can effectively move forward then view-points of many people must be heard and people might feel safe sufficient as a result that they can put forward their best ideas. When there is no debate among the

people inside the organization, then people have a habit to stick strained and true ways of doing works and applying for a new problems same old solution.

iii. Flexibility and Risk Taking

A simple truth of creative activities is that they are fundamentally unspecified. Every so often, there is no lawful evidence that make sure that an idea or advancement is sure to be successful. Sometime a creative idea itself might not be useful enough to be shape into new product, service or even into process improvement. As a result, risk is naturally put together into creativity. Many research studies shows that put up with this risk, not reducing it, is the best approach. Therefore, it is critical for the organizations that they can accept and permit the risk, inspire experimentation and disappointment.

iv. Upper Management Support

An additional to above another noticeable factor of a creative climate is the observation of caring from top management. This support involves both adopted support. When upper management transfer standards that inspire innovation, risk taking and experimentation, and passed support. This concluding form of support is possibly the most important, since it is the amount of resources such as money, time and facilities that upper management is prepared to obligate to creativity. Unlikely if resources are not available, staffs will see through the rhetoric of inspiration, effectively discouragement these hard working.

v. Positive Supervisor Relations

Supervision of new ideas by manager or team leader is serious for further development and putting into practice of these ideas. Particularly supportive managers pay attention and give response to these ideas and stand with to a sure degree of experimentation. In addition, supervisors should openly identify and reward creative struggles.

vi. Positive Interpersonal Exchange

The last significant part of creative climates is happiness. When members of the team experience a sense of friendship that arise with a mutual goal, members of team will needs to collaborate efficiently for their shared advantages. Due to this it will increases the performance of both team as well performance of the individual also. Through increased closeness communication is simplified, which will allow different viewpoints and will help to keep conflict away from them.

2.14 Scales for Measuring Creative Climate

For assessing and measuring the creative climate in an organization in an effective group, a researcher Nemiro (2001), developed a scale the Virtual Team Creative Climate (VTCC), this scale was based on 11 factors that represent various dimensions that are contributing to the individual creativity in the organization and its factors comprises of an ideas acceptance and fruitful tension, organizational challenge, relationship, dedication/commitment, organizational freedom, clarity of goal, sharing of information, administration inspiration, personal relationship of an individual, enough organizational resources, adequate time and organizational trust and he further classified the model into broad categories into three main scale that were organizational connection, availability of raw materials in organization as well as skilled based supervision and team members.

While developing an analytical tool for identifying the dimensions of creative climate, research studies shows that creative climate of organization can be assessed into four major categories (Ekvall et al., 1983):

1. Common trust between managers and employees and having self-confidence for ideas support, unclosed affiliations.

2. Organizational challenges and motivation, obligation to the goals and programs of the organization.
3. Organizational freedom to search for information and show creativity. To bring creativity in the classroom, creativity climate can be its major source.
4. This includes the diversity in the views of employees as well as experiences and knowledge and this diversity can be used to exchange the opinions and ideas between employees.

For assessing the above four major categories of creative climate, a questionnaire called Creative Climate Questionnaire was developed based on 50 item by Ekvall (1996). When factor analyses and some other necessary analytical tools was appalled ten sub variables were put forward that helps in studying the organizational creative climate. The ten variables were;

1. Organizational challenges (it is the degree to which the people working in the organization are enthusiastically involved in working and goals of the organization as well as try to find desire and significance in their work).
2. Organizational freedom (it is the independence of behavior of employee's and their self-independence to define their duties regarding job).
3. Supporting an idea (its' show the treatment of new ideas and recommendations are made by supervisors and coworkers in concentrating and approachable way which in return helps to give a way of finding new ideas).
4. Organizational trust/openness (it is the level of observed emotional protection in relationships within organization, when the degree of trust between employees is strong then every employees tries to present new ideas and his point of views therefore advantages can be bring about without any fear of tease in the shape of disappointment).

5. Enthusiasm/liveliness (almost every second new things are happened because of which thinking abilities are also changing frequently about handling issues).
6. Playfulness/Humor (the observed comfort and impulsiveness of the social environment create an atmosphere of relaxation with laughter and jokes).
7. Organizational debate (its concern about meetings between employees and managers, exchanging of ideas or clanks between ideas, different employees viewpoints and differing experiences and knowledge).
8. Organizational risk-taking (the acceptance of ambiguity in the organization, decisions making and actions are mostly taking rapid, risks are taken due to seizing upon arising opportunities and solid experimentation is desired to complete examination and scrutiny)
9. Time for idea (it define the amount of time that can be used creating new ideas, well define time to discuss that idea and time to test desires and recommendations that was not planned or encompassed in the task project).
10. Organizational conflicts (it is the degree of sensitivity and individual pressures in the organization when employees in the groups does not agreed upon one thing due to which these individuals dislike each other. As a result there is huge conversation and labialization which is a negative factor).

The above mention questionnaire of the researcher to study creative climate in organization was translated into another languages and few changes were also made by Isaksen et al in 1999. From the above developed questionnaire one of the dimensions was removed that was enthusiasm/liveliness and a new shape of questionnaire for assessing the creative climate was made and the name was Situational Outlook Questionnaire (SOQ). From many years different researchers used the above creative climate measuring questionnaires in the organization. A

research study was conducted in a Swedish university about their climate and level of creativity and a data from 130 teachers were collected and the finding shows that are these factors have relationship with the creative climate (Ekvall and Ryhammar (1999). The dimensions that were included in SOQ can be used for assessing creative climate of educational institutions and can be interpreted with respect to school-work, school learning and problem-solving abilities in school creative climate too, according to the study of Richards (2002), other than this some other dimension of creative climate might be applicable in the school setting. Due to uncertainty about the psychometric dimensions to assess the creative climate of organization in the above questionnaire might limits its application (Mathisen and Einarsen, 2004).

To assess the creative climate of the organization different types of research questionnaire were developed. A team of researchers Amabile and her team members (1996), developed a KEYS questionnaire for assessing the creative work environment of the organization and were based on 78 items with four-point response scales focusing on the individual working environment perceptions. After conducted the study on the Amabile and her colleagues (1996), developed KEYS questionnaire and found the results that of in depth assessment of employees observation of creative climate and enable the manager to give advice to the employees for further development in the organization. The KEYS questionnaire consist of ten subscale including stimulating scales these are organizational inspiration, administrative, team supports, adequate organizational resources, organizational challenging tasks, employees freedom and two scales for the obstacles were organizational weaknesses and amount of work pressure and two criterion scales were also mentioned inventiveness and output. The above scale of Amabile and her colleges were mostly developed for the organizational creative climate and was not fully relevant in context with educational organization.

For measuring organizational creative climate, Siegel and Kemmerer (1978), developed a questionnaire with name the 'Siegel Scale of Support for Innovation (SSSI)' to measure the factors that are present in creative organization and includes several important dimensions that are relevant at educational organization through individual climate perceptions. The above scale based on 6-point Likert scale consists of 61 items questionnaire considerably ahead of time. The five major dimensions of this scales includes;

1. Leadership (this point describe that in innovative organization what is the role of leaders)
2. Ownership (feeling about the proposed right of the employees)
3. Standards for diversity (progressive approach in the direction of diversity, individual independence),
4. Uninterrupted development and Reliability (no difference or gaps between processes of organization and preferred products of organization).

According to Mathisen and Einarsen (2004), the major problem of the above scale was only its' limited documentation exist about its psychometric characteristics but considered as stilly worthy regarding a creative climate in different dimensions that might help as a contributing factor in the classroom. Inside the classroom creative climate is considered as a stimulating factor for creativity. A new inventory scale the TCI (Team Climate Inventory) was mainly developed for measuring creativity in the group climate innovation and were mainly focused on the development of creativity in groups (Anderson & West, 1998). This inventory was original consisted of 61 items questions but lately it was revised and converted into new shorter version into 38 items forms and even make it shorter up to 14 item is also presented (Kivimaki and Elovainio, 1999). The scale was consists of both four major dimensions as well as subscales too. The dimensions of these scales were;

1. Vision. This dimension discusses about the organizational goals and team objectives that they are clearly defined and appreciated. It also includes the sub-scales of clarity, idealistic nature, achievability and hardness of the goals.
2. Participative safety. This dimension includes the observation regarding environment by employees that interpersonally non-threatening, and environment is safe for the employees to present new ideas. This dimension is also divided into the subscales that are sharing of information, security, and inspiration and collaboration regularity.
3. Task orientation. This dimension specifies the common worry of quality in task performance with fineness, judgment and ideation sub-dimensions.
4. Support for innovation. It is about the amount of the probability of authorization of and practical support for bringing new ideas and it includes the subscales of expressed and legislated support.

According to Mathisen and Einarsen (2004), the above scale psychometric structures is well established and its' measure creative climate in working groups in the most appropriate ways but due to secure organization foundations it's less helpful in the educational organization.

A team of researchers thoroughly studies and interprets the environmental determinants directly in educational organization (Ferrari, Cachia and Punie (2009). These researchers listed the entire possible factor that helps the classroom to improve the creativity. Eight major factors were discussed that helps in creativity including process of assessment, classroom culture, curriculum that is going to be implemented, skills of the individual, formats of teaching and learning method, teachers, technology and helping tools. Questionnaire itself a measuring scale, but a self-monitoring checklist that helps in identifying critical factors of the creative climate. The

checklist was not based upon only the above mentioned factors but includes also some other factors consisting of educational, methodological, environmental and individuals factor as well. For effective teaching practices it was considered but due to statistical analysis it was not used for research.

2.15 University and Creative Climate

The European parliament and the Council (2006), expounded that the university as any higher educational institution based on the nation laws and rule or practice which offers recognized degrees or recognized higher level qualification, vocational education or training. Define by the Merriam-Webster (2019), university is organization or institution of providing higher learning facilities of teaching and research and authorized to award academic degrees.

Universities are the epicenters to provide professionals human resources to the society for the accomplishments of its requirements. Universities provides skilled professionals to the market who contribute to society (Morais et al,2017).From past many years the role of university is changing according to the needs and demand of not only the society but also based on the individual need as well. According to the Dunderstadt et al,(2005), due to fundamental ways the role of university is changed because it plays an important role in the demands of knowledge society where construction of knowledge, the creation of innovation and progress are given importance.

According to Grove-White, (2008) universities characterize the platform directly preceding individual/students access into the profession market place, which have need of a specified labor force with the skill to make over the society. The author stated in the book that universities are sources of research and knowledge with a great creative potential and are the key foundations for the global program of creativity (Smith-Bingham, 2006). According to Sternberg (2004),

universities should not limit their selves as a sources of providing knowledge only but universities has also the role that it prepares the students for upcoming challenges, opportunities, by promoting students flexibility, skills and creativity in students that helps them to manage their lives. According to MacLaren (2012), when talking about opportunities about university, then creative universities provides and describes the harmful impact on society values and principles such as time pressure, maintaining cost efficiency and monitoring for production.

A multiple researches studies are conducted on creative climate in organization but education sector are still deprived of such studies. According to the focusing of Ekvall (1999), whose force that due to some competition there is growing need and plea for creativity and different methods of instruction in the classroom. In present age, the role of education is to prepare the student for the future, therefore the best way to prepare the student for the future need is to enable them that performing in such way will make them flexible and productive as much as possible (Robinson, 2009). According to Moran (2010), due to creativity the individual can become more motivated in making the expected state of mind into reality and for them future comparatively becomes as an opportunity rather than a risk. From the above statement its' concluded that creativity can be vital for individual as well as for the future education system.

In education system, specifically at university level there are present different types of teaching methods, evaluation and assessment methods, expectations and values. A research study was conducted and stated the association between various field of studies and creativity, for instances the field of Art can be often more radical or challenging creativity because it accept more risk and originality, while in case of field of Physics and Mathematics will put up with more socially conventional creativity and concerned with problem solving and field of foreign language may agree to take any kind of creativity (Cropley& Cropley, 2009). Another research study was

conducted on creativity at education level and show that based on the perception of creativity different groups of students from various studies fields are different regarding creativity perception (Gluck, Ernst & Unger, 2002). A study was conducted in Brazil and Portugal University, a result was found that students of science and technology presents more negative perception about the university climate for the expression of idea and encouragement of new ideas in the classroom as compared to students of Arts and humanities (Morais, Fleith, Almeida, Azevedo, Alencar, & Araujo, 2017). Another study was conducted in Portugal among Portuguese teachers and found that teachers of Humanities resulted that they have less involvement in events and less entrance to information about creativity as regard as science teachers (Monteiro et al., 2013). Similar research study was conducted by Morias and Azevedo (2008), and found that Humanities teachers are required to get more training in creativity and considered that at initial stage of training less training is conducted to creativity as related to Science teachers ratings.

According to Barkoczi (2012), most of the Hungarian schools usually assess hardworking, accommodative, obedient students but not a creative or individualistic ones, as a result which over and over again create disruption and fuss in the classroom process and most of the organization does not even have need of creativity, as a result of which employees can uses creative abilities only in the time of relaxation with whom he/she can live rather than using during work in the organization. Other than Ekvall dimensions for creative climate in organization, another research Fleith (2000) identified classroom behaviors which help in enhancing creativity and are link with Ekvall dimensions and these are proper allocation of time for bring new ideas and creative thinking, reward system for creative ideas and products (challenge), inspiring practical risks (risk-taking), permitting them is takes of employees,

visualization other views or questioning rules (debate), discovering the environment, discovering importance and problems, producing numerous hypotheses, concentrating on comprehensive ideas rather than specific evidences and evaluating about the thinking processes. Due to the importance of creative climate in educational structure there is still lack of researches in the field of creative climate of classroom.

Numerous research studies were conducted whose main focus was to identify creative climate in the classroom and the types of behaviors and activities suggesting creative climate and taking dimensions of Ekvall as a foundation, which helps in providing a base line for the researchers to form conditions for creativity. Different students and teachers at various educational institutions conducted a projects focusing on finding Ekvalls' dimensions in the educational environment especially in gifted education (Aurigema, 2001; Richards, 2002). Despite of using questionnaire for measuring creative climate dimensions, these researchers use qualitative approaches and measures that as classroom observations, interviews with teachers and students. The major purpose of their project was to develop such types of standardized questionnaire that can be helpful for future researcher for assessing creative climate and they developed a checklist as Creative Climate Checklist about School Setting (CLASS).

According to the study of Jesberger (2001), who's finds shows that the creative climate dimensions for classroom setting can act as an element of improvement element. According to the study of Richards (2002), whose divided these dimensions in both at kindergartens school level as well as elementary schools and concluded that almost all the teachers that she observed has the idea of creative climate and these teachers purposefully try to create its principles into classroom processes. Despite to these, she also identified several other structures that seem to be suitable in creating of climate of creativity in educational setups. According to the finding of her

studies in order to build trust and openness towards colleague social acceptance is important. For instance those students cannot focus on academic development whose are not socially accepted, if only being accepted by the teacher results in the child later becomes as a teacher's favorite, which also prevents the high performance of the students. The leadership dimension inside the classroom refers to such activities that are initiated by the social leader of the classroom and tells other to follow such behavior. Friendship is the perspective which brings the sense of learning about specific work while being together, sharing ideas, sharing together success or become together in such a way to plan something new are the part of this friendship dimension. In sight of this students feels that they have ownership in taking part in the process of teachings and learning in the classroom. According to the study of Klimoviene et al (2010), whose assess the university students while using the 20-item questionnaire assessing the same creative climate dimensions as Ekvall at the university climate and they found that between the development of foreign language attainment and university climate factors has relationship. Finding of all these studies suggest that model of creative climate research in an organizational setting can be used as well as in the educational sector only up to certain degree because of the specific school standards, classroom processes and children's groups have their own values.

Creativity can be endorsed in numerous fields and during the course of students' educational lives, in or outside university sitting room (Jackson, 2006). According to Cropley and Cropley (2000), due to the need of creativity, significance of supporting creative climate has been largely studied by higher education. Higher Education studies widely creative climate due to the need of creativity and its significances (Gibson, 2010).

According to Deverell and Moore (2014), at university teaching practices should be focused more on training students to find out and explore, problem tackle , take risk and think creatively,

act judgmentally and by means of self-confidence and rather than just concentrating on transmission of subject matter and schedules. Finding the significance of creativity in higher education but there is still dissertation that indicates difficulties and even conflicts. According to the research conclusion that it's very difficult for educational organization that they come up in such position as they use of creative practices because it demands more flexibility between teachers and pupils actions (Brook & Milner, 2014). Based on the importance of creative climate of university, universities are failed to update successfully their teaching material and the teaching practices not for the demand of future but as well as for the present circumstances (McWilliam, 2008). Teacher are the main pillar in developing student skills, so creativity in higher education need to be study as in important issue for the teaching practices (Walker& Gleaves, 2008). Many research studies are conducted in different corner around the world. A study was conducted in United Kingdom by Oliver et al., (2006), found that due to some condemnation to teaching methods and evaluation methods that do not promote creativity among other measured dimensions of teaching.

According to Hennessey (2004), who's advice to develop a creative climate for the students but she also enunciate five different environmental constraints. These constraints are expected reward, expected evaluation, competition, limited time and investigation, which are proven to be the keen destroyer of intrinsic motivation and creativity. (Hennessey, 2004)

2.16 University as an Organizational Creative Climate

There were multiple studies conducted on universities climate with different variables and different relations. According to Pan and Song (2014), who's analyzed that chain of universities climate with university administration, teacher and students. Most of the developing countries are at the back of the developed countries because they are unable to implement proper climate

with make them left behind or fall far behind the developed countries interm of creativity (Refaat et al., 2014).

Due to the changing circumstances of the business today's along with developments for instances globalization, advancement in technology and knowledge based, economy has pressurized the organizations to be more inventive (Kim& Mauborgne,2005). Along with, to stay alive, become used to, and increase competitive benefit, organizations need to set free their member of staff essential creative potential because member of staff creative ideas can be utilize as units for organizational innovation, revolution, as well as effectiveness (Zhou & George, 2003). According to Florida (2002), Human creativity is known as a serious economic means since creativity is in due course what advances efficiency and thus increases living values. According to Unsworth and Parker (2003), due to training and learning for employees, subject matter knowledge, creative process, motivation and creative self-efficacy can be increased.

According to the Williams (2001), in the organization, the main feature for bring creativity is the role of manager. He further stated that manager can affect their subordinated creativity and risk taking and managers role are the portion of bring new creativity in organization Williams (2001), states that creativity is the main factors that will help the manager to motivate their workers and creativity will help them by providing adequate support and inspiration. The above statements means that university taking as an organization creative climate can help the university management, teachers as well as students and will motivate them. A researcher added that employees can be made creative and creativity can be supported if the pre-determined goal of the organization is based on creativity (Egan, 2005). Another researcher also agree to the about statement and explain that to motivate the workers to be creative then associated goals should be set creative (Shalley, 2008). According to finding of George (2007), in order to inspire creativity

in the staff of the organization then the organization must provide a clear ways of safety to the staff.

Creative work behavior is helpful for the production and effectiveness of the organization and requires deep involvement of the workers in their work by giving them independence and making the work experience meaningful to them (Raja & Madhavi, 2018). Climate of organization have a strong effect of on organizational productivity. In educational organization context, organization consumes money, time, effort and many other resources to produce a creative individual. An institutional Creative climate has a strong relation with this process of resources and outcomes.

2.17 Creative Climate and Pakistani Universities

In perspective of the Pakistani universities there have been many researches that evaluate the universities in different terms like work environment, effect of work environment on employees' performance, creative workplace, but there is no specific research which evaluates the creative climate of public and private sector universities in context of creative climate.

In the research (Tanveer & Hassan, 2020) argued that there are many organizational culture and environment or climate factors facilitate and effect creativity within organization. The researchers addressed the role of creative ideas in Pakistani educational field and find out the importance of creativity and creative ideas in education setup.

Muhammad et al. (2015) evaluated a Pakistani, private business university of Karachi work environment and teachers job satisfaction. In this study researchers found out positive relationship of work environment factors on university faculties job satisfaction, and they suggest in the study that if the management want to increase the faculty job satisfaction level

then management have to provide freedom and constructive environment to faculty. As freedom is one of dimension of creative climate.

Rabbani & Sarmad (2018), seen the role of creative self efficacy between climate for creativity dimensions like freedom, employees creativity workload pressures and creativity on IT industry of Pakistan.

Another study held in Lahore to assess the role of organization climate on quality of work of private universities faculties (Arif & Ilyas, 2013). In which researchers found out work climate as a major factor contributing in to the work attitude and work quality.

A study conducted by Ishaque et al. (2014), assess a charted private university of Islamabad creative work environment through the Amabile's organizational creativity model in a qualitative way. Through interviews data, researchers find out the impact of freedom, supervisory support, resource allocation and other variables on creative work environment.

The presented- literature proofed that there is need to conduct a brief research to evaluate Pakistani universities in term of creative climate.

2.18 Summary

In a nut shell this chapter comprehensively expounded the detail literature and studies of different researcher around the world. This chapter covered the significance of creative climate for an organization as well as for the university too. The literature first of all discussed creativity and climate. This chapter covers also that how climate is different from culture. This chapter briefly discussed the organizational climate as well as it gives the studies about the main factors or dimension of organizational climate.

This chapter included that what is creative climate and discussed the different models based on different dimensions of different researchers. It also comprises the obstacles and facilitators of

creative climate. It gives detail that how creative climate can be evaluated through different assessment tools like assessment tool of Ekvall and KEYS assessment tools. At the end this chapter discussed university and creative climate and Pakistani universities and creative climate.

The next chapter will cover the research methodology of the studies that will give the detail that how this research is going to be taken and what's it nature of the study, its population, sample size of the study and what will be the research tool and how data will be collected and analyzed.

CHAPTER 3

METHODS AND PROCEDURES

3.1 Introduction

Chapter three enunciates the research methodology of the study in comprehensive way. The major objective of the study "comparative analysis of universities with reference to creative climate" is to compare the public and private sector universities with reference to Creative Climate. Chapter three consists of research design and research methodology, which pursued for the conduction of this research. Research population, sample and sampling techniques also described in this chapter. Development, validity and reliability of research instrument also discussed. Pilot testing of research questionnaire, procedure for getting responses of respondents and data analysis techniques of collected responses are also a part of this chapter.

3.2 Research Approach

The objectives of the research are to compare the public and private sector universities with reference to Creative Climate, to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, to compare different universities with reference to creative climate, to compare different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness). The quantitative research approach is accurate to the objectives to the study, as quantitative deals with numbers, which is

measureable in a systematic way of investigation. The quantitative approach used to draw the conclusion from comparative analysis of responses of universities faculty members about the creative climate of their universities. Descriptive approach has tremendous in research quantitative design. Researcher selected descriptive (survey) approach as a research design of this study.

3.3 Research Population

The research population was all the faculty members (Social Sciences and Management Sciences faculties) of public and private sector universities of Islamabad. There are twenty general universities (public and private) in Islamabad tertiary according to Higher Education Commission. Only seven public sector and four private sector universities of Islamabad Capital Tertiary are those in which have the both, faculty of Social Sciences and Management Sciences. Eight hundred and fifty (850) university faculty members are from seven public and two hundred and forty four(244)university faculty members from four private universities(according to universities websites). The population of research is delimited to only seven public sector (International Islamic University Islamabad, National University of Modern Languages Islamabad, Bahria University Islamabad, COMSATS Institute of Information Technology Islamabad, Federal Urdu University of Arts, Sciences & Technology Islamabad, Quaid –i-Azam University Islamabad, Air University Islamabad)and four private sector (Capital University of Science & Technology Islamabad, Foundation University Islamabad, Riphah International University Islamabad, National University of Computer & Emerging Sciences Islamabad)universities with one thousand and ninety four (1094) universities faculty members from Social Sciences and Management Sciences faculties.

Table 3.1

Population of the Study

Sector's	**No of Universities**	**Population**
Public	7	850
Private	4	244
Total	11	1094

3.4 Sampling Technique and Sample

3.4.1 Sampling Technique

Probability sampling gives an equal chance to every individual of population to being selected as a sample of study. Stratified sampling is one of the probability sampling techniques, selected as a sampling technique for data collection of present study. Stratified sampling technique divided population into homogenous groups with same characteristics. Proportionate stratified sampling technique selected and implemented for selecting sample of present study. The two strata are made. One stratum is faculty members from public sector universities and second stratum is faculty members from private sector universities of Islamabad Capital Territory.

3.4.2 Sample

The sample of study selected from the university faculty members of public and private sector universities of Islamabad. Total population was 1094 faculty members of public and private sector universities. Faculty members of seven public sector universities are 850 and in four private sector universities faculty members are 244(according to universities websites). To given an equal chance, fifty percent of the data is targeted from

each stratum. After given 50% to each stratum, total sample size of study is 299 faculty members of public and private sector universities. 243 faculty members from six public sector universities(International Islamic University Islamabad, National University of Modern Languages Islamabad, Bahria University Islamabad, COMSATS Institute of Information Technology Islamabad, Federal Urdu University of Arts, Sciences & Technology Islamabad, Quaid –i-Azam University Islamabad) and 56 universities faculty members from three private sector universities(Capital University of Science & Technology Islamabad, Foundation University Islamabad, Riphah International University Islamabad) is the sample of study.

Table 3.2

Sample of the Study

Sector's	**No of Universities**	**Sample of study**
Public	6	243
Private	3	56
Total	9	299

3.5 Instrument of the study

The instrument is important in research for collecting data. According to the purpose of research, questionnaire selected as a study tool of the present study. The researcher developed a closed

ended (five point Likert Scale) questionnaire based on Goran Ekvall creative climate model. It has ten dimensions which are: challenge, freedom, trust / openness, idea time, playfulness / humor, conflict, idea support, debate, risk-taking, dynamism / liveliness. Initially 70 statements were prepared about ten dimensions of creative climate in the questionnaire but 11 statements were decreased after discussion with supervisor and educational experts during validity process. After validity finalized questionnaire had two parts, section one consists demographics information of faculty members of universities and section two consists of 59 statements about ten dimensions of creative climate model. Cover letter was added and name was given to finalized research questionnaire on the observations of educational experts. The followings were details of Creative Climate of Universities Questionnaire (CCUQ);

3.5.1 Demographic Information

The first part of questionnaire contains following demographics information

a. University name

b. University's sector

c. Faculty

d. Gender

e. Experience

3.5.2 Creative Climate

The second part of the questionnaire includes 59 statements about ten dimensions of Ekvall's creative climate model. The following table shows the details about number of statements of each dimension of questionnaire.

Table 3.3

Showing items of questionnaire about Creative Climate of Universities Questionnaire(CCUQ)

Major dimensions of Creative Climate	**Total no of items in each dimension**	**Representative Items**
Idea Time	8	1,2,3,4,5,6,7,8
Risk Taking	5	9,10,11,12,13
Challenge	9	14,15,16,17,18,19,20,21,22
Freedom	6	23,24,25,26,27,28
Idea Support	6	29,30,31,32,33,34
Conflict	4	35,36,37,38
Debate	6	39,40,41,42,43,44
Playfulness/Humor	6	45,46,47,48,49,50
Trust/Openness	6	51,52,53,54,55,56
Dynamism /Liveliness	3	57,58,59

The questionnaire was a closed ended with five point Likert Scale. Respondents were asked to respond on five points Likert Scale: Strongly Agree= 05, Agree= 04, Neutral=3, Disagree= 02 and Strongly Disagree=01.

1. Strongly Agree (SA)
2. Agree (A)
3. Neutral (N)
4. Disagree (D)

5. Strongly Disagree (SD)

3.5.3 Coding Procedure

To handle the questionnaire, coding procedure used for data interpretation. Where 5 was used for Strongly Agree,4 was used for Agree,3 was used for Neutral,2 was used for Disagree , and 1 was used for Strongly Disagree. In the case of some statements reverse coding procedure was used in analyzing data, like 1 used for Strongly Agree, 2 used for Agree, 3 used for Neutral, 4 used for Disagree and 5 used for Strongly Disagree.

Table 3.4

Coding Description of the Creative Climate of Universities Questionnaire(CCUQ)

Scale	**Major Section**	**No of Items**	**Items coding**
	Idea Time	8	IT 1- IT 8
	Risk Taking	5	RT 1 – RT 5
	Challenge	9	CH 1 – CH 9
	Freedom	6	FD 1 – FD 6
Creative Climate	Idea Support	6	IS 1 – IS 6
	Conflict	4	CO 1 – CO 4
	Debate	6	DE 1 – DE 6
	Playfulness/Humor	6	PF 1 – PF 6
	Trust/Openness	6	TR 1 – TR 6
	Dynamism/ Liveliness	3	DL 1 – DL 3

3.6 Pilot testing

The questionnaire tested as a pilot testing on a small portion of sample before applying the questionnaire on whole sample of research. It was conducted on same population but did not mention in the actual sample group. Pilot testing is useful to analyze the strength and weaknesses of the research questionnaire that either the questionnaire needs further amendments. Pilot testing of the research instrument was done on faculty members of one public sector (Air University Islamabad) and one private sector (National University of Computer & Emerging Sciences Islamabad) universities of from population of study. The 104 questionnaires were distributed to faculty members for pilot testing from both universities. After return questionnaire, eighty eight (88) complete questionnaires were taken for pilot testing procedure. Statistical Package for Social Sciences (SPSS) used to check the reliability of scale.

3.7 Validity and Reliability of tool

3.7.1 Validity

The validity of study instrument in Social Sciences is important to gather the information. Validity of research tool means that a tool should measure what it is intended to measure. Three experts analyzed the validation of research instrument. The experts from education field were selected for validity analysis of research questionnaire. Experts analyzed the face validity of research questionnaire by locking at the face of research questionnaire that whether the questionnaire is valid to measure the concept which is intended to measured. The experts analyze the construct validity of the questionnaire thoroughly that whether the research instrument is valid to measure proposed theoretical construct. The experts also assess the content validity of research questionnaire that either the items of the questionnaire measure the desired concept. Few amendments were made on research

instrument based on experts' observations. Before the tool validation, questionnaire existed 70 items. Where few items modify and some deleted from research questionnaire. After validity, the questionnaire consisted 59 items about ten dimensions of creative climate. Cover letter was also added in the questionnaire. An English language expert also analyzed the research questionnaire in terms of grammar and language. The language expert converted difficult words into simple words that everyone can easily read out it. All the experts issued the validity certificates which have been attached in Annexure. (see Appendices G,H)

3.7.2 Reliability

The researcher conducted pilot study of research instrument for the reliability, after approval of tool by experts. The collected data of pilot testing was analyzed for reliability by Statistical Package for the Social Sciences (SPSS). The internal consistency of questionnaire was analyzed through Chronbach's Alpha reliability. The Creative Climate of Universities Questionnaire was found reliable at .918 Cronbach's Alpha. The dimensions of research questionnaire (Creative Climate of Universities Questionnaire) was also found reliable at idea time= .903, risk-taking= .848, challenge= .805, freedom= .911, idea support = .824, conflict= .868, debate = .750, playfulness / humor= .765, trust / openness= 689 and dynamism / liveliness=. 841 Cronbach's Alpha. As according to Hinton and colleagues (2004) there are four cut- off points for reliability where (0.50 and below) low reliability, (0.50- 0.70) moderate reliability, (0.70 – 0.90) high reliability and (0.91 and above) is excellent reliability (Taherdoost, 2016). The questionnaire was found reliable for final data collection. The detailed questionnaire results of reliability were given below.

Table 3.5

Reliability of the Creative Climate of Universities Questionnaire(CCUQ)

Total items	**59**
Cronbach's Alpha value	.918

Table 3.6

Dimensions wise reliability of Creative Climate of Universities Questionnaire(CCUQ)

Variables	**Items**	**Crobach's Alpha**
Idea Time	8	.903
Risk Taking	5	.848
Challenge	9	.805
Freedom	6	.911
Idea Support	6	.824
Conflict	4	.868
Debate	6	.750
Playfulness/Humor	6	.765
Trust/Openness	6	.689
Dynamism/Liveliness	3	.841

3.8 Data Collection

Data Collection is chiefly important ingredient of the study. Data collection from concerned persons was a big and difficult phase of study. The researcher personally visited to those

universities of Islamabad which are sample of study, for taking responses from faculties. The permission letter authorized by the Dean of education department of National University of Modern Languages Islamabad was given to the concerned universities' administration for data collection. After getting the permission from university, researcher personally meets faculty members and request to give their valuable responses through research questionnaire. The administration staff of some universities got the forms field by themselves. The research data was gathered from the sample universities faculty members of social sciences and management sciences from public and private sector universities in Islamabad Capital Territory.

3.9 Statistical Analysis

Analysis of data was done by using SPSS 21. Mean, Standard Deviation, Mann Whitney U – test and ANOVA with Post HOC (Bonferroni) used for achieving objectives and analyzing hypotheses of study.

3.10 Objectives, Hypotheses and Statistical Procedure

Table 3.7

Objectives, Hypotheses and Statistical Procedure

Objectives	Hypotheses	Statistical Procedure Used
To compare the creative climate of public and private sector universities.	There is no significant difference between public and private sector universities with the reference to creative climate.	Mann Whitney U- test
To compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/ humors, trust/openness and dynamism/liveliness) in public and private sector universities.	There is no significant difference between public and private sector universities with reference to idea time. There is no significant difference between public and private sector universities with reference to risk taking. There is no significant difference between public and private sector universities with reference to challenge. There is no significant difference between public and private sector	Mann Whitney U- test

	universities with reference to freedom.
	There is no significant difference between public and private sector universities with reference to idea support.
	There is no significant difference between public and private sector universities with reference to conflict.
	There is no significant difference between public and private sector universities with reference to debate dimension.
	There is no significant difference between public and private sector universities with reference to playfulness/humors.
	There is no significant difference between public and private sector universities with reference to trust/openness.
	There is no significant difference between public and private sector universities with reference to

	dynamism/liveliness.	
To compare the different universities with reference to creative climate.	Ho 12. There is no significant difference among different universities with reference to creative climate.	ANOVA ,Post Hoc (Bonferroni)
To compare the different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/ humors, trust/openness and dynamism/liveliness).	Ho13. There is no significant difference among different universities with reference to idea time. Ho14. There is no significant difference among different universities with reference to risk taking. Ho15.There is no significant difference among different universities with reference to challenge. Ho16. There is no significant difference among different universities with reference to freedom. Ho17.There is no significant difference among different universities with reference to idea support. Ho18. There is no significant difference among different universities with reference to conflict.	ANOVA, Post Hoc (Bonferroni)

	Ho19. There is no significant difference among different universities with reference to debate. Ho20.There is no significant difference among different universities with reference to playfulness/humors. Ho21.There is no significant difference among different universities with reference to trust/openness. Ho22.There is no significant difference among different universities with reference to dynamism/liveliness.

3.11 Ethical Consideration

The code of ethics is very essential for the researcher. Ethical consideration was kept in mind while conducting this study. This research study was an attempt to find out the comparative analysis of universities with reference to creative climate, to be determined the creative climate of universities not to provide harm to organization and individuals working in it. The names of respondents were not asked due to confidentiality. Only the willing respondents were request to participate in this research. Work of other researcher cited properly.

3.12 Limitations of the study

The major limitation of the study was the low rate of questionnaires return.

3.13 Summery

Chapter three comprehensively elucidates research design, variables, population and sample of study also part of present chapter. Sampling technique discussed comprehensively in it. Development of instrument, validity and coding of instrument described step by step in this chapter. To check the reliability of questionnaire, pilot testing held. Full process and results of pilot testing has also part of this chapter. This chapter provides information about administration of instrument, data collection procedure and data analysis procedure. Ethical consideration and limitations of the study is also part of current chapter.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF THE DATA

4.1 Introduction

This chapter throws light on the data analysis and interpretation of results for analyzing universities with reference to creative climate. The objectives of study,comparative analysis of universities with reference to creative climate were to compare the public and private sector universities with reference to Creative Climate, to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, to compare different universities with reference to creative climate, to compare different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness).The study was descriptive survey by nature with quantitative research approach. Questionnaire used for analyzing the creative climate of universities, based on ten sub dimensions, Idea Time, Risk Taking, Challenge, Freedom, Idea Support, Conflict, Debate, Playfulness/Humor, Trust/Openness and Dynamism/Liveliness. The questionnaire pillared on Ekvall's creative climate framework with fifty-nine statements. Five-point scale used for analysis of university faculty members (public and private sector) opinions about creative climate. The questionnaire divided into two parts. First part includes demographic information of university faculty members. Demographic information consist university name, university's sector, faculty, gender

and experience. Second part comprises different statements about ten dimensions of creative climate.

Questionnaires were circulated to the sample of study four hundred and ninety five faculty members from six public(International Islamic University Islamabad, National University of Modern Languages Islamabad, Bahria University Islamabad ,COMSATS Institute of Information &Technology Islamabad, Federal Urdu University of Arts, Sciences & Technology Islamabad, Quaid –i-Azam University Islamabad)as well as three private sectors universities(Capital University of Science & Technology Islamabad, Foundation University Islamabad, Riphah International University Islamabad) of Islamabad Capital Territory. Three hundred and eleven questionnaires ware returned. Out of these, two hundred and ninety-nine questionnaires were useful and complete information. Two hundred and forty –three university faculty members respond from six public sector universities and fifty-six faculty members respond from three private sector universities. Therefore two hundred and ninety nine questionnaires where entered in SPSS for statistical analysis. This is the sixty percent (60%) of the total sample of study. Data analysis and interpretation was done accordingly to objectives and hypothesis of this research. SPSS 21 was applied for the analysis of study data. Mean, Standard Deviation, Mann Whitney U and ANOVA Post HOC tests were used for achieving objectives and analyzing hypotheses of study.

Part-I

4.2 Descriptive Data Analysis Regarding Demographics Respondents

This section of chapter elucidates data about demographics of university faculty members as university name, university's sector, university faculty, gender and experience. These demographics provide details of university faculty members of six public and three private sector universities of Islamabad Capital Territory in frequencies and percentages.

Table 4.1

Universities wise Distribution of the Sample (N=299)

Universities	**Frequency**	**Percent**
Bahria University ,Islamabad	22	7.4
COMSATS Institute of Information Technology, Islamabad	57	19.1
Capital University of Science & Technology, Islamabad	13	4.3
Foundation University Islamabad	27	9.0
Federal Urdu University of Arts, Sciences & Technology, Islamabad	15	5.0
International Islamic University, Islamabad	70	23.4
National University of Modern Languages, Islamabad	27	9.0
Quaid –i-Azam University, Islamabad	52	17.4
Riphah International University Islamabad	16	5.4
Total	**299**	**100.0**

Table 4.1 elaborates that nine universities were taken as a sample of study. In sample universities, 7.4% participate from Bahria University Islamabad, 19.1 percent from COMSATS Institute of Information Technology Islamabad, 4.3 percent from Capital University of Science &

Technology Islamabad, 9.0 percent from Foundation University Islamabad, 5.0 percent from Federal Urdu University of Arts, Sciences & Technology Islamabad, 23.4 percent from International Islamic University Islamabad, 9.0 percent from National University of Modern Languages Islamabad, 17.4 percent from Quaid –i-Azam University Islamabad and 5.4 percent from Riphah International University Islamabad participate in this study.

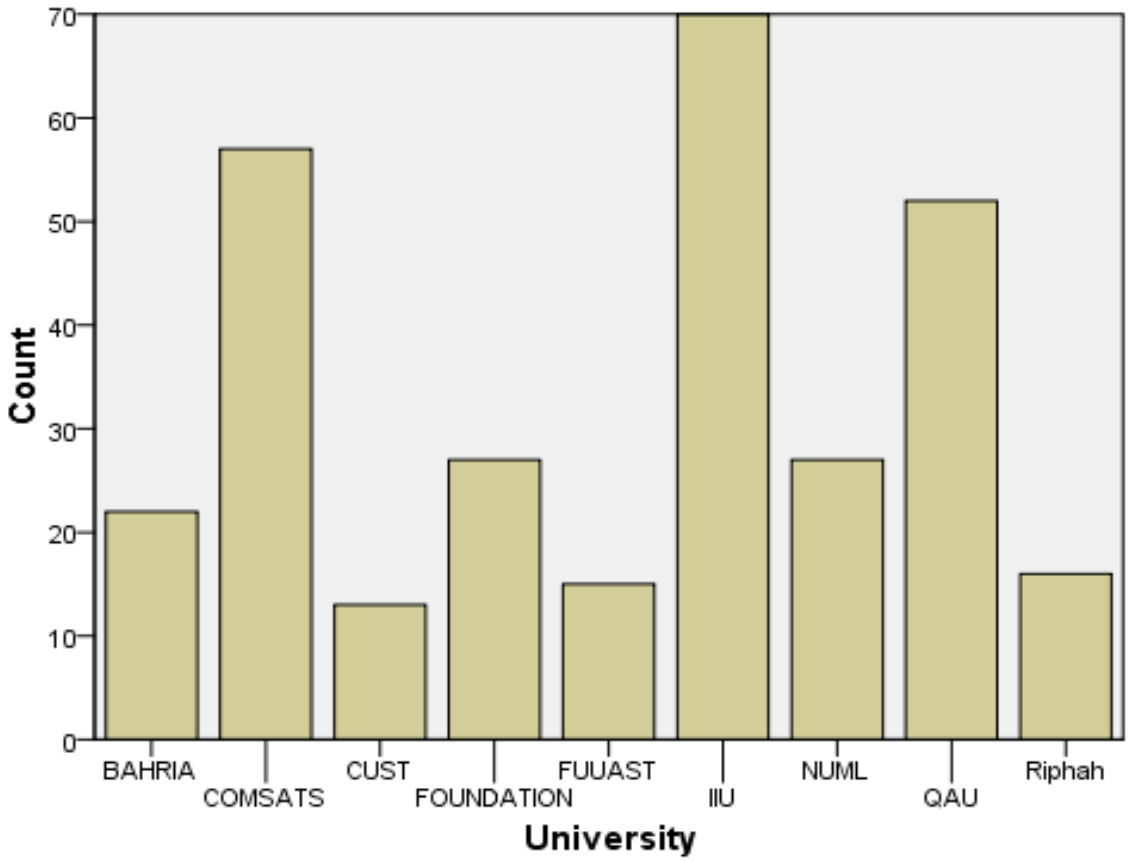

Figure 4.1 Universities wise Distribution of the Sample (N=299)

Table 4.2

Sector(public & private)wise Distribution of the Sample (N=299)

Sectors	**Frequency**	**Percent**
Public	243	81.3
Private	56	18.7
Total	**299**	**100.0**

Table 4.2elucidates the total number of public and private university faculty members participated in the study. 243 public sector university faculty members and 56 private sector university faculty members participated as a study sample. The number of responses from public sector university faculty is greater in number than private university faculty responses. Figure 4.2 throws light the percentage of public and private university faculty members. The percentage results indicate that public sector university faculty members responses is 81.3% on other hand private sector university faculty members responses is 18.7%.Therefore university faculty members respondents of private sector has less than in percentage as faculty members of public sector universities.

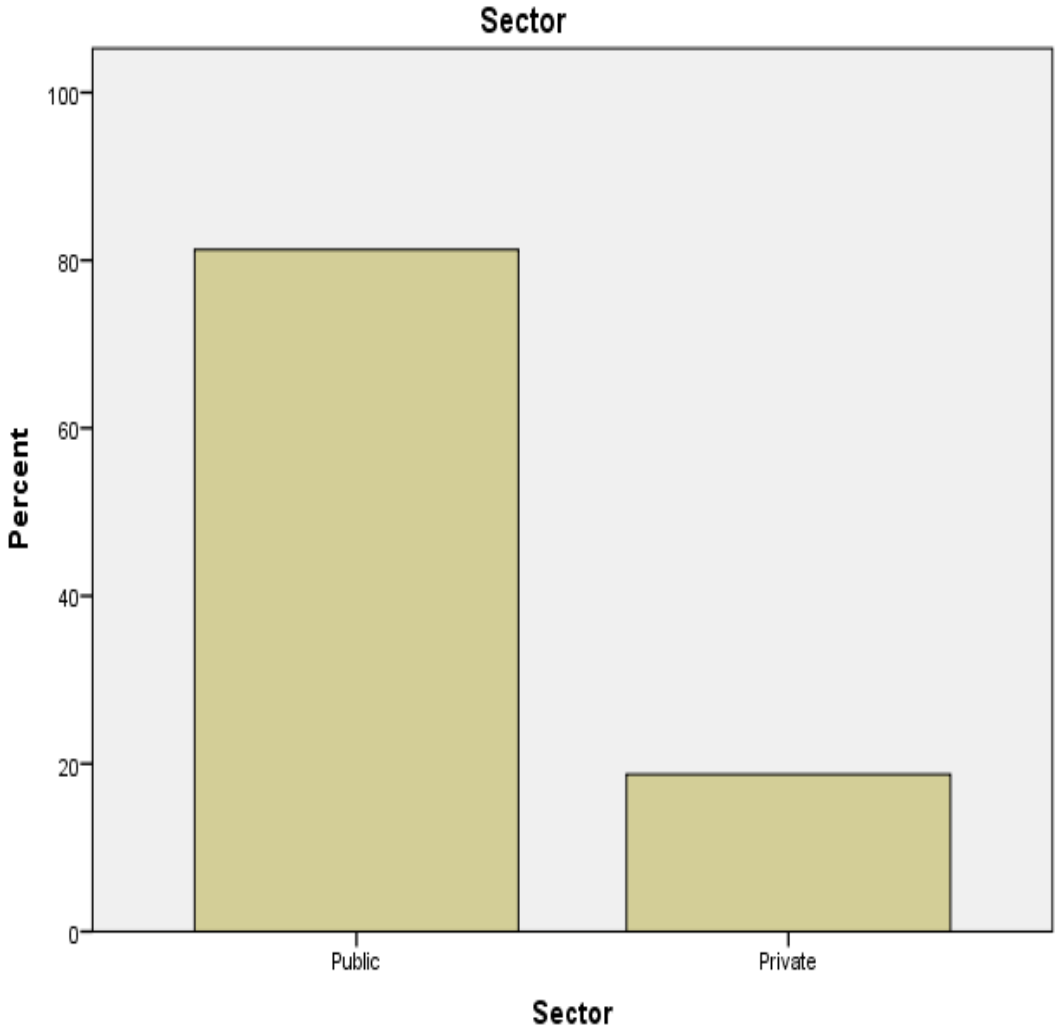

Figure 4.2 Sector (public & private)wise Distribution of the Sample (N=299)

Table 4.3

Universities Faculties (Social Sciences and Management Sciences)wise Distribution of the Sample (N=299)

Faculties	**Frequency**	**Percent**
Social Sciences	155	51.8
Management Sciences	144	48.2
Total	**299**	**100.0**

Table 4.3 enunciates the responses number of Social Sciences and Management Sciences of public and private university faculty. 155 university faculty members from Social Sciences and 144 university faculty members from Management Sciences participated in the study. The number of Social Sciences university faculty members is greater in numbers than Management Sciences university faculty members. Figure 4.3 indicates the percentage of Social Sciences and Management Sciences university's faculty respondents. The percentage results of university faculty members of Social Sciences is 51.8% and Management Sciences university faculty members is 48.2%. The percentage of university faculty members of Social Sciences is greater than university faculty members of Management Sciences.

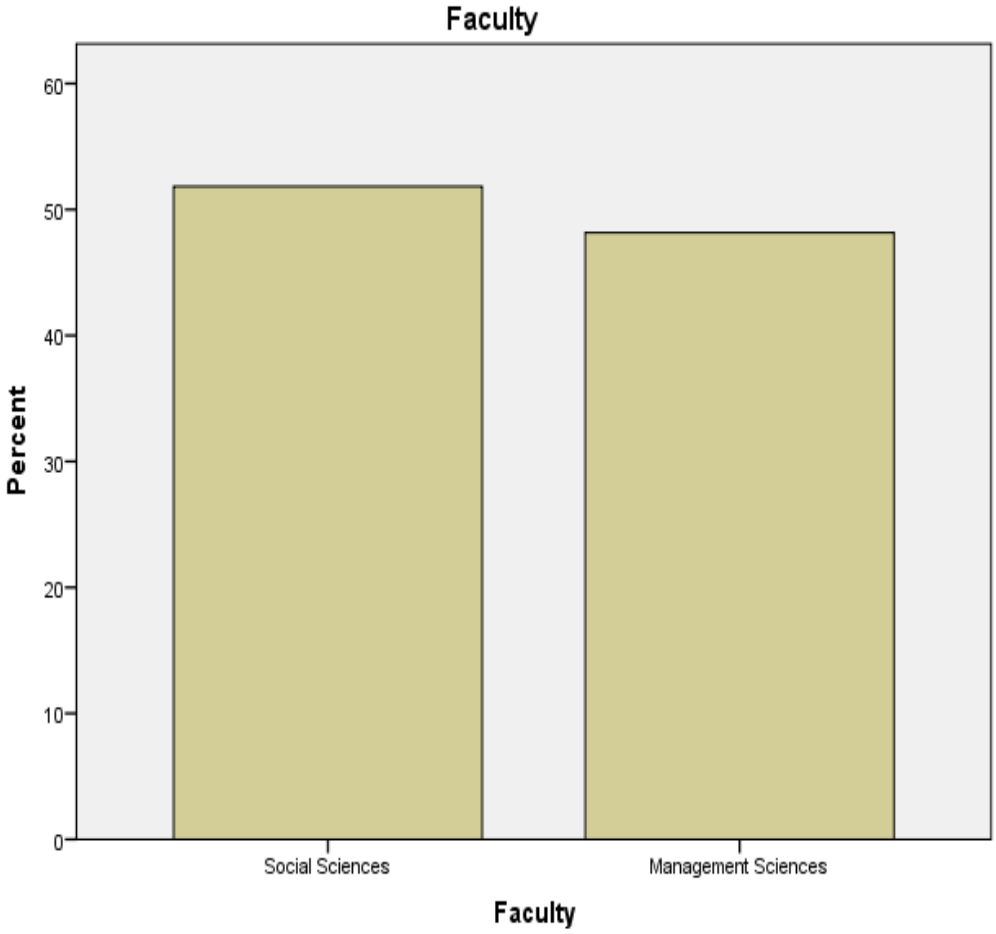

Figure 4.3 Universities Faculties (Social Sciences and Management Sciences)wise Distribution of the Sample (N=299)

Table 4.4

Gender wise Distribution of the Sample (N=299)

Gender	**Frequency**	**Percent**
Male	168	56.2
Female	131	43.8
Total	**299**	**100.0**

Table 4.4 interprets the number and percentage of male and female university faculty members, who became a part of this study. 168 male university faculty members and 131female university faculty members participate in sample. Total 299university faculty members included in sample. The number of male university faculty member's respondents is greater than the number of female university faculty members. Figure 4.4 present the percentage results of male and female university faculty in graph. The percentage of male responses is 56.2% and of female university faculty members is 43.8%. The percentage of male university faculty member's respondents is greater than female university faculty members in sample.

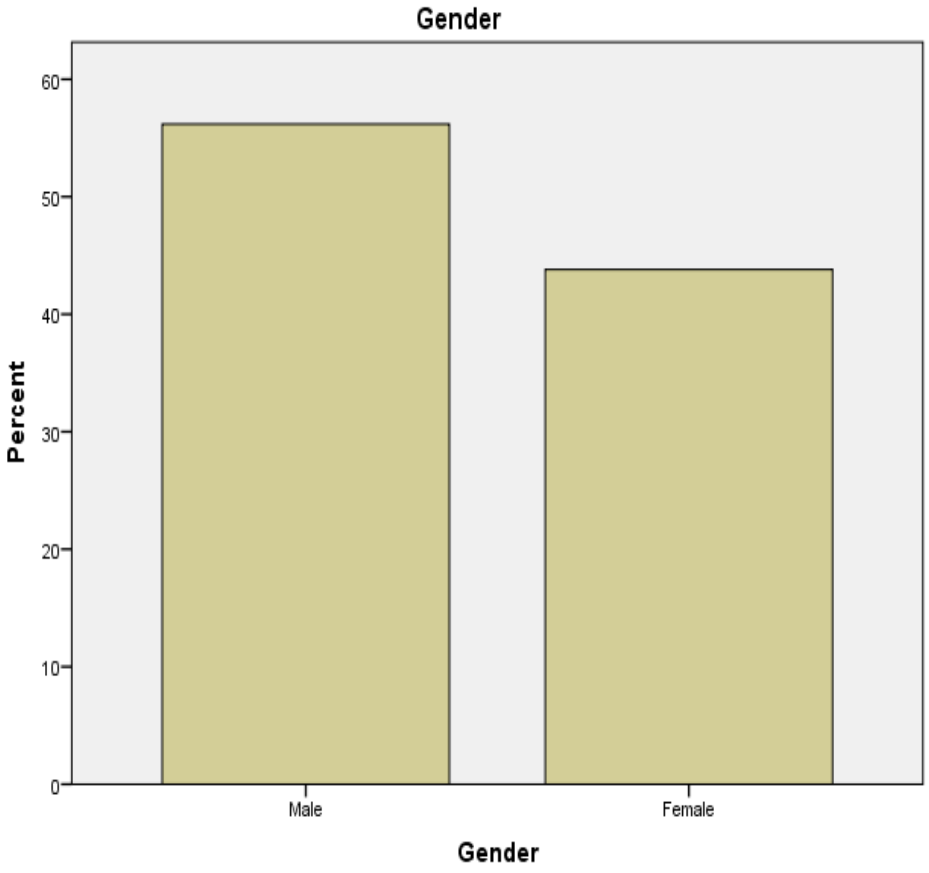

Figure 4.4 Gender wise Distribution of the Sample (N=299)

Table 4.5

Experience wise Distribution of the Sample (N=299)

Experience	Frequency	Percent
1-5 years	69	23.1
6-10 years	80	26.8
11-15 years	86	28.8
More	64	21.4
Total	**299**	**100.0**

Table 4.5 describes the number and percentage of university faculty members responses according to experience wise. 69 numbers of university faculty members respondents from 1-5 years job experience, 80 university faculty members with 6-10 years' job experience. The number of university faculty members with 11-15 years' experience is 86 and 64 from more experience of university faculty members in sample. The number of university faculty members group with 11-15 years' job experience is greater in the sample. Figure 4.5 illustrates the percentage of university faculty member's job experience responses. The percentage of university faculty members job experience from 1-5 years is 23.1% and university faculty members job experience6-10 years is 26.8%, the job experience of university faculty members from 11 -15 years is28.8% . The percentage results university faculty members experience from "more: is 21.4%. The university faculty members, with 11-15 years job experience are in majority in the sample and there is less then number of university faculty members with more years of job experience.

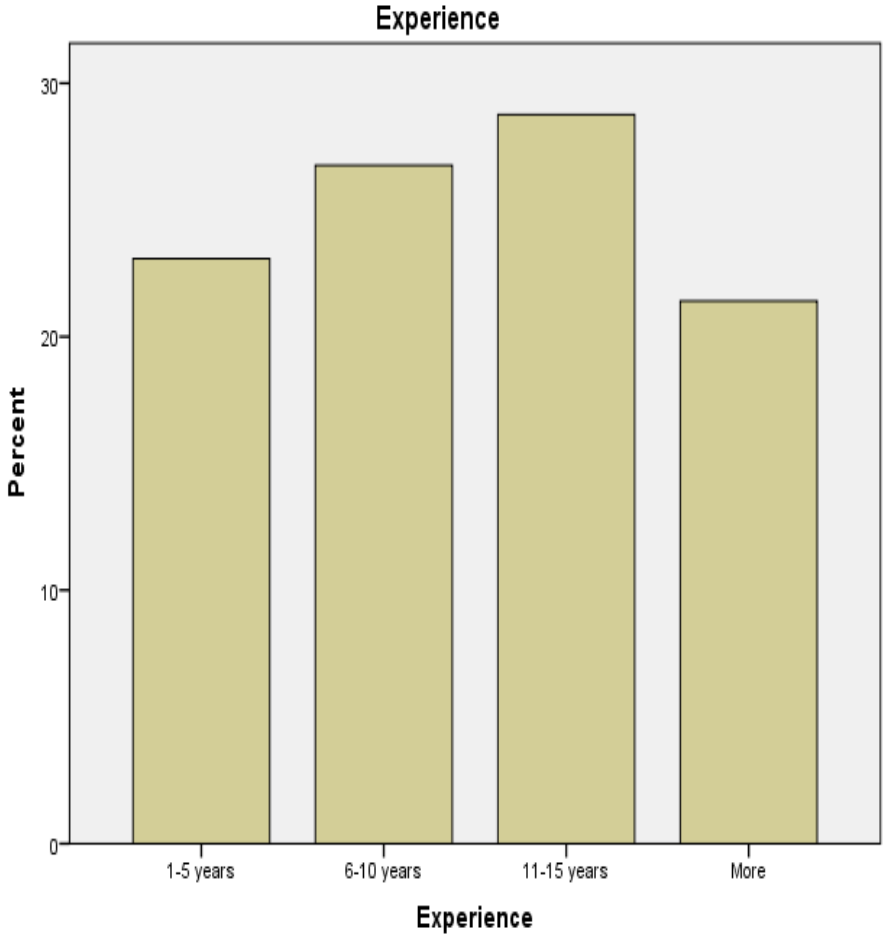

Figure 4.5 Experience wise Distribution of the Sample (N=299)

Part- II

4.3 Data Analysis Regarding Creative Climate

Section two contains information regarding the creative climate of universities.

Table 4.6

Overall Creative Climate (dimensions) of Universities (N=299)

Variable	Sub variables/dimensions	Means	M(M)	SD
Creative Climate		**207.38**	**3.51**	**25.47**
	Idea Time	29.08	3.63	6.12
	Risk Taking	14.57	2.91	3.64
	Challenge	35.08	3.89	5.13
	Freedom	20.07	3.34	4.99
	Idea Support	21.55	3.59	5.22
	Conflict	13.07	3.26	3.57
	Debate	21.16	3.52	3.76
	Playfulness/Humor	21.62	3.60	3.70
	Trust/Openness	20.58	3.43	4.00
	Dynamism / Liveliness	10.56	3.52	2.50

Five-point scale was used to measure the Creative Climate of Universities. These were strongly agree ranking 5, agree 4, neutral 3, strongly disagree 2 and disagree ranking1. Table 4.6 shows

overall creative climate of universities found (mean=207.38). In dimensions wise results of mean value indicate that overall universities are high in challenge (mean=3.89) and lower in risk taking (mean=2.91) dimensions of creative climate. In highest to lowest mean results, Challenge dimension (mean=3.89), Idea time dimension (mean=3.63), Playfulness/humor dimension (mean=3.60), Idea Support dimension (mean=3.59), Dynamism/Liveliness dimension (mean=3.52), Debate dimension(mean=3.52), Trust/Openness dimension (mean=3.43), Freedom dimension (mean=3.34),Conflict dimension (mean=3.26) and Risk taking dimension(mean=2.91).

Table 4.7

Creative Climate and its ten Dimensions in Public & Private Sector Universities (N=299)

Variable	**Sub variables/dimensions**	**Public N=243**			**Private N=56**		
		Means	**M(M)**	**SD**	**Means**	**M(M)**	**SD**
Creative Climate		206.30	3.49	25.56	212.07	3.59	24.78
	Idea Time	28.87	3.60	6.17	29.96	3.74	5.87
	Risk Taking	14.44	2.88	3.63	15.17	3.03	3.68
	Challenge	34.79	3.86	5.15	36.37	4.04	4.91
	Freedom	19.99	3.33	4.99	20.42	3.40	5.05
	Idea Support	21.53	3.58	5.26	21.66	3.61	5.07
	Conflict	13.05	3.26	3.60	13.12	3.20	3.46
	Debate	20.94	3.49	3.87	22.08	3.68	3.09
	Playfulness/Humor	21.60	3.6	3.71	21.69	3.61	3.66
	Trust/Openness	20.53	3.42	3.99	20.83	3.47	4.04
	Dynamism / Liveliness	10.53	3.51	2.50	10.71	3.57	2.49

The results of table 4.7 show that overall private sector universities have good creative climate (mean= 212.07) as compare to public sector universities creative climate (mean= 206.30). In dimensions wise results of mean value indicate that public sector universities were high in challenge dimension (mean=34.79) and lower in risk taking dimension (mean=14.44). Private

sector university results of mean value also indicate that universities were high in challenge dimension (mean=36.37) and lower in risk taking dimension (mean=15.17).

In dimensions' wise comparison, results of mean value show that idea time dimension (public sector mean=28.87 and private sector mean= 29.96), risk taking dimension (public sector mean=14.44 and private sector mean= 15.17), challenge dimension (public sector mean=34.79 and private sector mean= 36.37), freedom dimension (public sector mean=19.99 and private sector mean= 20.42), idea support dimension (public sector mean=21.53 and private sector mean= 21.66), conflict dimension (public sector mean=13.05 and private sector mean= 13.12), debate dimension (public sector mean=20.94 and private sector mean= 22.08), playfulness/humor dimension (public sector mean=21.60 and private sector mean= 21.69), trust/openness dimension (public sector mean=20.53 and private sector mean= 20.83)and dynamism/liveliness dimension (public sector mean=10.53 and private sector mean= 10.71).

Part –III

4.4 Analysis of Public and Private Sectors with Reference to Creative Climate

There were eleven hypotheses formulated for present study. All hypotheses testing through Mann Whitney U test. Hypotheses were tested on the 0.05 level of significance.

Objective1: To compare the creative climate of public and private sector universities.

Hypothesis Ho1: "There is no significant difference between public and private sector universities with reference to creative climate".

Table 4.8

Mean and Mann Whitney U test value results of public and private sectors Universities Creative Climate (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Creative Climate of Universities	147.31	161.68	6150.00	-1.121	.262

P < 0.05

The results of table 4.8 U= 6150.00,Z= -1.121, p= .262 is not significant at p< 0.05 level of significance. Thus the null Hypothesis that "There is no significant difference between public and private sector universities with reference to creative climate" was failed to reject. The university faculty members' working in private sector universities mean value (161.68) is found higher as compared to public sector universities means value (147.31). However, there is no statistically significant difference seen between public and private sector universities with

reference to creative climate. It is concluded that although the private sector mean rank is slightly high as compared to public sector but there is statistical no significant difference between public and private sector universities with reference to creative climate.

4.4.1 Objective 2. To compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities.

Hypothesis Ho2: “There is no significant difference between public and private sector universities with reference to creative climate idea time dimension”.

Table 4.9

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Idea Time (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Idea Time Dimension of Creative Climate	147.62	160.34	6225.00	-.996	.319

P <0.05

Results of table 4.9 demonstrate that there is statistically no significant difference (U= 6225.00, Z= -.996, p= .319) found between public and private sector universities faculties regarding idea time dimension of Creative Climate at p<0.05 level of significance. Therefore the null Hypothesis No 2: “There is no significant difference between public and private sector universities with reference to creative climate idea time dimension” is failed to reject. However, the mean value of private sector universities (160.34) is higher than the mean value of public sector universities (147.62) with reference to Idea Time dimension of Creative Climate.

4.4.2 Hypothesis Ho3: "There is no significant difference between public and private sector universities with reference to creative climate risk taking dimension".

Table 4.10

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Risk Taking (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Risk Taking Dimension of Creative Climate	146.34	165.88	5915.00	-1.529	.126

P < 0.05

The results of table 4.10 highlights, the mean value (165.88) of private sector universities is higher than the public sector universities mean (146.34) results with reference to Risk Taking dimension of Creative Climate. The table results also indicates that there is statistically no significant difference (U = 5915.00, Z = - 1.529, p= .126) seen on the level of significance at p< 0.05, between public and private sector universities faculties about Risk Taking dimension of Creative Climate. Thus null Hypothesis No 3: "There is no significant difference between public and private sector universities with reference to risk taking dimension of Creative Climate" is failed to reject. The both public and private sector universities ware the same page with reference to Risk Taking dimension of creative climate.

4.4.3 Hypothesis Ho4: "There is no significant difference between public and private sector universities with reference to creative climate challenge dimension".

Table 4.11

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Challenge (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Challenge Dimension of Creative Climate	145.84	168.05	5793.00	-1.741	.082

P < 0.05

Results of table 4.11 described there is no statistically significant difference (U= 5793.00, Z= -1.741, p= .082) observed between public and private sector universities faculties regarding Challenge dimension of Creative Climate, at p< 0.05 level of significant. Therefore the null Hypothesis No 4: "There is no significant difference between public and private sector universities with reference to creative climate challenge dimension" is failed to reject. Though the mean rank (168.05) indicates that private sector universities is bather then the public sector universities(145.84) with reference to challenge dimension of creative climate but statistical results presents that there is no significant difference between public and private sector universities with reference to creative climate challenge dimension.

4.4.4 Hypothesis Ho5: "There is no significant difference between public and private sector universities with reference to creative climate freedom dimension".

Table 4.12

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Freedom (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Freedom Dimension of Creative Climate	148.59	153.13	6460.500	-.590	.555

P < 0.05

The results of table 4.12 express, the mean value (153.13) of private sector universities is greater than the mean value (148.59) of public sector universities with reference to Freedom dimension of creative climate. The table also shown that there is statistically no significant difference found between public and private universities with reference to Freedom dimension of Creative Climate(U= 5793.00, Z= -1.741,p= .082) at significance level p< 0.05. Thus null Hypothesis No 5: "There is no significant difference between public and private sector universities with reference to creative climate Freedom dimension" is failed to reject.

4.4.5 Hypothesis Ho6: "There is no significant difference between public and private sector universities with reference to creative climate idea support dimension".

Table 4.13

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Idea Support (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Idea Support Dimension of Creative Climate	147.57	160.54	6214.00	-1.017	.309

P < 0.05

Results of table 4.13 (U= 6214.00, Z= -1.017,p= .309) showed that there is statistically no significant difference found at p< 0.05 level of significance, between public and private universities faculty members related to Idea Support dimension of Creative Climate. Therefore null Hypothesis No 6: "There is no significant difference between public and private sector universities with reference to creative climate idea support dimension" is failed to reject. The private sector universities mean value (160.54) is higher as compared to public sector universities mean value (147.57) with reference to Idea Support dimension of Creative Climate.

4.4.6 Hypothesis Ho7: "There is no significant difference between public and private sector universities with reference to creative climate conflict dimension".(N= 299)

Table 4.14

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Conflict (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Conflict Dimension of Creative Climate	149.02	154.26	6565.500	-.411	.681

P < 0.05

The table 4.14 result showed the mean value (154.26) of private sector universities is greater than the mean value (149.02) of public sector universities. Table also shown that there is statistically no significant difference found between public and private universities with reference to Conflict dimension of Creative Climate(U= 6565.500, Z= -.411,p= .681) at p< 0.05 level of significance. Therefore the null Hypothesis No 7: "There is no significant difference between public and private sector universities with reference to Creative Climate Conflict dimension" is failed to reject.

4.4.7 Hypothesis Ho8: "There is no significant difference between public and private sector universities with reference to creative climate debate dimension".

Table 4.15

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Debate (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Debate Dimension of Creative Climate	146.45	165.39	5942.00	-1.489	.137

P < 0.05

Results of table 4.15 illustrate there is no statistically significant difference exists between public and private universities faculty members related to Debate dimension of Creative Climate(U= 5942.00, Z= -1.489 ,p= .137) at p< 0.05 the level of significance. Thus null Hypothesis No 8: "There is no significant difference between public and private sector universities with reference to creative climate debate dimension" is failed to reject. Although private sector universities mean value (165.39) greater than the public sector universities mean value(146.45) with reference to Debate dimension of Creative Climate but there is no statistical significant difference is found.

4.4.8 Hypothesis Ho9: "There is no significant difference between public and private sector universities with reference to creative climate playfulness/humors dimension".

Table 4.16

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Playfulness/Humors (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Playfulness/Humors Dimension of Creative Climate	150.45	148.04	6694.00	-.190	-.849

P < 0.05

The table 4.16 results showed that the public sector universities mean value (150.45) is better than the private sector mean value (148.04) with reference to Playfulness/Humors dimension of creative climate. Table results (U= 6694.00, Z= -.190,p= .849) also elaborate that there is statistically no significant difference is found between public and private universities faculty members related to Playfulness/humors dimension of Creative Climate, at p< 0.05 level of significance . Therefore the null Hypothesis: "There is no significant difference between public and private sector universities with reference to playfulness/humors dimension of creative climate" is failed to reject.

4.4.9 Hypothesis Ho10: "There is no significant difference between public and private sector universities with reference to creative climate trust/openness dimension".

Table 4.17

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Trust/Openness (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Trust/Openness Dimension of Creative Climate	148.88	154.87	6531.500	-.469	-.639

P <0.05

The table 4.17 explained there is statistically no significant difference between public and private universities faculties respondents with reference to Trust/ Openness dimension of Creative Climate(U= 6531.500, Z= -.469,p= .639) at p< 0.05 level of significance. Therefore the null Hypothesis that "There is no significant difference between public and private sector universities with reference to creative climate trust/openness dimension" is failed to reject. The mean value (154.87) of private sector universities is higher than the mean value(148.88) of public sector universities with reference to Trust/Openness dimension of Creative Climate.

4.4.10 Hypothesis Ho11: "There is no significant difference between public and private sector universities with reference to creative climate dynamism/liveliness dimension".

Table 4.18

Mean and Mann Whitney U test value results of public and private sectors Universities with reference to Dynamism / Liveliness (N=299)

Variable	Public(N=243) Mean Rank	Private(N=56) Mean Rank	Mann Whitney U	Z	p value
Dynamism /Liveliness Dimension of Creative Climate	148.43	156.82	6422.00	-.670	-.503

P < 0.05

The table 4.18 results showed, private sector universities mean value (156.82) is greater than the public sector universities mean value (148.43)with reference to Dynamism/liveliness dimension of Creative Climate. The table results also shown that there is statistically no significant difference between public and private universities faculties respondents related to Dynamism/Liveliness dimension of Creative Climate(U= 6422.00, Z= -.670,p= -.503) at p< 0.05 the level of significance. Hence null Hypothesis No 11: "There is no significant difference between public and private sector universities with reference to creative climate dynamism/liveliness dimension" is failed to reject.

Part –IV

4.5 Analysis of Universities with Reference to Creative Climate

Section four contains detailed comparative analysis of public and private sector universities regarding creative climate and dimensions of creative climate.

Ho 12. There is no significant difference among different universities with reference to creative climate.

Table 4.19

Analysis of Universities with reference to Creative Climate. Results of ANOVA Post HOC (Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Creative	Bahria University ,Islamabad	22	207.27	298	3.456	.001
Climate	COMSATS Institute of Information Technology, Islamabad	57	205.12			
	Capital University of Science &Technology, Islamabad	13	229.23			
	Foundation University, Islamabad	27	208.48			
	Federal Urdu University of Arts, Sciences & Technology, Islamabad	15	196.86			
	International Islamic University, Islamabad	70	202.04			
	National University of Modern Languages, Islamabad	27	202.07			
	Quaid-i- Azam University, Islamabad	52	217.86			
	Riphah University Islamabad	16	204.18			

P <0.05

Table 4.19 shows F value (3.456) regarding the analysis of universities with reference to creative climate (p= .001) is significant at p< 0.05 level of significance, therefore the null Hypothesis no12; “There is no significant difference among different universities with reference to creative climate” is rejected. There is a significant difference among universities with reference to Creative Climate. Table illustrates that Capital University of Science &Technology, Islamabad has higher Creative Climate(m=229.23) among other universities, while the Federal Urdu University of Arts, Sciences &Technology, Islamabad has a least Creative Climate(m=196.86).

Post Hoc (Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to creative climate. Creative Climate of sample universities has been shown in detail significant results below in table.

Table 4.20

Post Hoc (Bonferroni) Test

(I)Sample group	**(J)Sample group**	**Mean Difference (I-J)**	**Sig.**
Capital University of Science& Technology, Islamabad	Bahria University ,Islamabad	21.95	.414
	COMSATS Institute of Information Technology ,Islamabad	21.95	.059
	Foundation University Islamabad	20.74	.479
	Federal Urdu University of Arts, Sciences & Technology Islamabad	32.36	.022
	International Islamic University Islamabad	27.18	.011
	National University of Modern Languages, Islamabad	27.15	.045
	Quaid-i-Azam University Islamabad	11.36	1.00
	Riphah International University	25.04	.251
Federal Urdu University of Arts, Sciences & Technology Islamabad	Bahria University ,Islamabad	-10.40	1.00
	COMSATS Institute of Information Technology ,Islamabad	-8.25	1.00
	Capital University of Science& Technology, Islamabad	-32.36	.022
	Foundation University Islamabad	-11.61	1.00
	International Islamic University	-5.17	1.00

	Islamabad		
	National University of Modern Languages, Islamabad	-5.20	1.00
	Quaid-i-Azam University Islamabad	-20.99	.143
	Riphah International University	-7.32	1.00
International Islamic University Islamabad	Bahria University, Islamabad	-5.22	1.00
	COMSATS Institute of Information Technology ,Islamabad	-3.07	1.00
	Capital University of Science& Technology, Islamabad	-27.18	.011
	Foundation University Islamabad	-6.43	1.00
	Federal Urdu University of Arts, Sciences & Technology Islamabad	5.17	1.00
	National University of Modern Languages, Islamabad	-0.03	1.00
	Quaid-i-Azam University Islamabad	-15.82	.019
	Riphah International University Islamabad	-2.14	1.00
National University of Modern Languages, Islamabad	Bahria University, Islamabad	-5.19	1.00
	COMSATS Institute of Information Technology ,Islamabad	-3.04	1.00
	Capital University of Science& Technology, Islamabad	-27.15	.045

	Foundation University Islamabad	-6.40	1.00
	Federal Urdu University of Arts, Sciences & Technology Islamabad	5.20	1.00
	International Islamic University Islamabad	0.03	1.00
	Quaid-i-Azam University Islamabad	-15.79	.266
	Riphah International University Islamabad	-2.11	1.00
Quaid-i-Azam University Islamabad	Bahria University, Islamabad	10.59	1.00
	COMSATS Institute of Information Technology ,Islamabad	12.74	.270
	Capital University of Science& Technology, Islamabad	-11.36	1.00
	Foundation University Islamabad	9.38	1.00
	Federal Urdu University of Arts, Sciences & Technology Islamabad	20.99	.143
	International Islamic University Islamabad	15.82	.019
	National University of Modern Languages, Islamabad	15.79	.266
	Riphah International University Islamabad	13.67	1.00

$P < 0.05$

The table 4.20 shows the mean differences between respondents of Capital University of Science &Technology, Islamabad and Federal Urdu University of Arts, Sciences &Technology, Islamabad is (m=32.36), which is significant at p= 0.022. There is significant mean difference between Capital University of Science &Technology, Islamabad and International Islamic University, Islamabad (m=27.18) which is significant at p= 0.011. There is also mean significant difference between respondents of Federal Urdu University of Science & Technology, Islamabad and Capital University of Science &Technology, Islamabad (m= -32.36) which is significant at p=0.02.There is the mean differences between respondents of International Islamic University, Islamabad and Capital University of Science &Technology, Islamabad is (m= - 27.18) which is significant at p= 0.011. The mean differences between respondents of International Islamic University, Islamabad and Quaid-i-Azam University, Islamabad (m= -15.82) is also significant at p= 0.019. There is significant mean differences between National University of Modern Languages, Islamabad and Capital University of Science &Technology, Islamabad (m= - 27.15) respondents, which is significant at p= 0.045. There is mean significant difference between respondents of Quaid-i-Azam University, Islamabad and International Islamic University, Islamabad (m= 15.82) which is significant at p=0.019. While between other sample groups mean differences is not significant.

4.5.1 Ho 13. There is no significant difference among different universities with reference to Idea Time.

Table 4.21

Analysis of Universities with reference to Idea Time dimension of Creative Climate. Results of ANOVA and Post Hoc (Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Idea Time	Bahria University, Islamabad	22	30.13	298	2.148	.032
	COMSATS Institute of Information Technology ,Islamabad	57	29.63			
	Capital University of Science &Technology, Islamabad	13	31.76			
	Foundation University Islamabad	27	28.81			
	Federal Urdu University of Science & Technology, Islamabad and Capital University of Science &Technology, Islamabad	15	27.46			
	International Islamic University, Islamabad	70	28.62			
	National University of Modern Languages, Islamabad	27	25.44			
	Quaid-i-Azam University, Islamabad	52	30.03			
	Riphah International University Islamabad	16	30.43			

P <0.05

Table 4.21 shows F value (2.148) regarding the analysis of universities with reference to Idea time dimension of creative climate (p= .032) is significant at p< 0.05 level of significance,

therefore the null Hypothesis no13: “There is no significant difference among different universities with reference to idea time dimension of creative climate” is rejected. There is a significant difference among different universities with reference to Idea Time dimension of Creative Climate. Table elaborates that Capital University of Science &Technology, Islamabad has a greater mean value (31.76) and Federal Urdu University of Arts, Sciences &Technology, Islamabad has lower mean value (27.46) among other universities with reference to Idea time dimension of creative climate.

4.5.2 Ho 14. There is no significant difference among different universities with reference to Risk Taking.

Table 4.22

Analysis of Universities with reference to Risk Taking dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Risk Taking	Bahria University, Islamabad	22	13.77	298	1.327	.229
	COMSATS Institute of Information Technology ,Islamabad	57	14.75			
	Capital University of Science &Technology, Islamabad	13	16.00			
	Foundation University Islamabad	27	15.03			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	12.66			
	International Islamic University, Islamabad	70	14.08			
	National University of Modern Languages, Islamabad	27	14.81			
	Quaid-i-Azam University, Islamabad	52	15.17			
	Riphah International University Islamabad	16	14.75			

P <0.05

Table 4.22 illustrate F value (1.327) regarding the analysis of universities with reference to Risk Taking dimension of creative climate (p= .229) is not significant at p< 0.05 level of significance, therefore the null Hypothesis no 14: “There is no significant difference among different universities with reference to risk taking dimension of creative climate” is fail to rejected. There

is no significant difference among different universities with reference to Risk Taking dimension of Creative Climate. Table explains that although there is no significant difference with reference to Risk taking but Capital University of Science & Technology, Islamabad has a greater mean value (16.00) and Federal Urdu University of Arts, Sciences &Technology, Islamabad has lower mean value (12.66) among other universities with reference to Risk taking dimension of creative climate.

4.5.3 Ho15. There is no significant difference among different universities with reference to Challenge.

Table 4.23

Analysis of Universities with reference to Challenge dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Challenge	Bahria University, Islamabad	22	36.04	298	2.197	.028
	COMSATS Institute of Information Technology ,Islamabad	57	35.61			
	Capital University of Science &Technology, Islamabad	13	37.46			
	Foundation University Islamabad	27	34.77			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	33.33			
	International Islamic University, Islamabad	70	34.08			
	National University of Modern Languages, Islamabad	27	33.55			
	Quaid-i-Azam University, Islamabad	52	35.36			
	Riphah International University Islamabad	16	38.18			

P <0.05

Table 4.23 demonstrate F value (2.197) regarding the analysis of universities with reference to Challenge dimension of Creative Climate (p= .028) is significant at p< 0.05 level of significance, therefore the null hypothesis no15: “There is significant difference among different

universities with reference to challenge dimension of creative climate" is rejected. There is a significant difference among different universities with reference to Challenge dimension of Creative Climate. Table illustrates that Capital University of Science & Technology, Islamabad university has higher mean value (m=37.46) among other university, while the Federal Urdu University of Arts, Sciences &Technology, Islamabad has a least mean value (m=33.33) regarding Challenge dimension of creative climate.

4.5.4 Ho16. There is no significant difference among different universities with reference to Freedom.

Table4.24

Analysis of Universities with reference to Freedom dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Freedom	Bahria University, Islamabad	22	20.36	298	1.631	.116
	COMSATS Institute of Information Technology ,Islamabad	57	19.82			
	Capital University of Science &Technology, Islamabad	13	23.53			
	Foundation University Islamabad	27	20.51			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	18.06			
	International Islamic University, Islamabad	70	20.17			
	National University of Modern Languages, Islamabad	27	20.55			
	Quaid-i-Azam University, Islamabad	52	20.03			
	Riphah International University Islamabad	16	17.75			

P <0.05

Table 4.24 shows that F value (1.631) regarding the analysis of universities with reference to Freedom dimension of creative climate (p= .116) is not significant at p< 0.05 level of

significance, therefore the null Hypothesis no16: “There is no significant difference among different universities with reference to freedom dimension of creative climate” is failed to reject. There is no significant difference among different universities with reference to Freedom dimension of Creative Climate. Table shows that Capital University of Science &Technology, Islamabad university has high mean value (m=23.53) among other university, while the Federal Urdu University of Arts, Sciences &Technology, Islamabad has a low mean value (m=18.06) regarding Freedom dimension of creative climate.

4.5.5 Ho17. There is no significant difference among different universities with reference to Idea Support.

Table 4.25

Analysis of Universities with reference to Idea Support dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Idea Support	Bahria University, Islamabad	22	21.81	298	2.395	.016
	COMSATS Institute of Information Technology ,Islamabad	57	20.68			
	Capital University of Science &Technology, Islamabad	13	24.92			
	Foundation University Islamabad	27	20.88			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	20.23			
	International Islamic University, Islamabad	70	20.61			
	National University of Modern Languages, Islamabad	27	23.29			
	Quaid-i-Azam University, Islamabad	52	23.00			
	Riphah International University Islamabad	16	20.31			

P <0.05

Table 4.25 explains F value (2.395) regarding the analysis of universities with reference to Idea Support dimension of creative climate (p= .016) is significant at p< 0.05 level of significance, therefore the null Hypothesis no17: “There is no significant difference among different

universities with reference to idea support dimension of creative climate" is rejected. There is a significant difference among different universities with reference to Freedom dimension of Creative Climate. Table explains that Capital University of Science &Technology, Islamabad university has higher mean value (m=24.92) among other university, while the Riphah International University Islamabad has a least mean value (m=20.31) regarding Idea Support dimension of creative climate.

4.5.6 Ho18. There is no significant difference among different universities with reference to Conflict.

Table 4.26

Analysis of Universities with reference to Conflict dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Conflict	Bahria University, Islamabad	22	12.54	298	4.425	.000
	COMSATS Institute of Information Technology ,Islamabad	57	13.15			
	Capital University of Science &Technology, Islamabad	13	12.92			
	Foundation University Islamabad	27	12.37			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	10.53			
	International Islamic University, Islamabad	70	11.79			
	National University of Modern Languages, Islamabad	27	14.51			
	Quaid-i-Azam University, Islamabad	52	14.59			
	Riphah International University Islamabad	16	14.56			

P <0.05

Table 4.26 elaborate F value (4.425) regarding the analysis of universities with reference to Conflict dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null Hypothesis no18: “There is no significant difference among different

universities with reference to conflict dimension of creative climate" is rejected. There is a significant difference among different universities with reference to Conflict dimension of Creative Climate. Table illustrates that Quaid-i-Azam University, Islamabad university has highest mean value (m=14.59) among other university, while the Federal Urdu University of Arts, Sciences &Technology, Islamabad has a lowest mean value (m=10.53) regarding Conflict dimension of creative climate.

Post Hoc(Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to Conflict dimension of creative climate. Creative Climate of sample universities has been shown in detail significant results below in table.

Table 4.27

Post Hoc Test

(I) Sample group	(J) Sample group	Mean Difference (I-J)	Sig.
Federal Urdu University of Arts, Sciences &Technology, Islamabad	Bahria University Islamabad	-2.01	1.00
	COMSATS Institute of Information Technology ,Islamabad	-2.62	.312
	Capital University of Science &Technology, Islamabad	-2.38	1.00
	Foundation University Islamabad	-1.83	1.00
	International Islamic University, Islamabad	-1.43	1.00
	National University of Modern Languages, Islamabad	-3.98	.013
	Quaid-i-Azam University, Islamabad	-4.06	.002
	Riphah International University Islamabad	-4.02	.042
International Islamic University, Islamabad	Bahria University Islamabad	-0.57	1.00
	COMSATS Institute of Information Technology ,Islamabad	-1.18	1.00
	Capital University of Science &Technology, Islamabad	-0.95	1.00
	Foundation University Islamabad	-0.39	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	1.43	1.00

	National University of Modern Languages, Islamabad	-2.54	.041
	Quaid-i-Azam University, Islamabad	-2.62	.001
	Riphah International University Islamabad	-2.59	.240
	Bahria University Islamabad	1.97	1.00
	COMSATS Institute of Information Technology ,Islamabad	1.36	1.00
National University of Modern Languages, Islamabad	Capital University of Science &Technology, Islamabad	1.59	1.00
	Foundation University Islamabad	2.14	.784
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	3.98	.013
	International Islamic University, Islamabad	2.54	.041
	Quaid-i-Azam University, Islamabad	-.077	1.00
	Riphah International University Islamabad	-.043	1.00
	Bahria University Islamabad	2.05	.688
	COMSATS Institute of Information Technology ,Islamabad	1.43	1.00
Quaid-i-Azam University, Islamabad	Capital University of Science &Technology, Islamabad	1.67	1.00
	Foundation University Islamabad	2.22	.233
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	4.06	.002

	International Islamic University, Islamabad	2.62	.001
	National University of Modern Languages, Islamabad	0.07	1.00
	Riphah International University Islamabad	0.03	1.00
	Bahria University Islamabad	2.01	1.00
	COMSATS Institute of Information Technology ,Islamabad	1.40	1.00
	Capital University of Science &Technology, Islamabad	1.63	1.00
Riphah International University Islamabad	Foundation University Islamabad	2.19	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	4.02	.042
	International Islamic University Islamabad	2.59	.240
	National University of Modern Languages, Islamabad	0.04	1.00
	Quaid-i-Azam University, Islamabad	-0.03	1.00

P< 0.05

The Post Hoc table 4.27 explains the mean differences between respondents Federal Urdu University of Arts, Sciences &Technology, Islamabad and National University of Modern Languages, Islamabad is (m= -3.98), which is significant at p= 0.013. There is significant difference between Federal Urdu University of Arts, Sciences &Technology, Islamabad and Quaid-i-Azam University, Islamabad respondents with mean difference of (m= - 4.06) which is significant at p= 0.002 and Federal Urdu University of Arts, Sciences &Technology, Islamabad

is also significantly differ with Riphah International University Islamabad mean difference (m= -4.02) at p= 0.042.

Table illustrate the mean difference between International Islamic University Islamabad and National University of Modern Languages, Islamabad is (m= -2.54), which is significant at p= 0.041. There is significant mean difference between International Islamic University Islamabad and Quaid-i-Azam University, Islamabad is(m= -2.62) which is significant at p=0.001. There is significant difference between National University of Modern Languages, Islamabad group with Federal Urdu University of Arts, Sciences &Technology, Islamabad is (m=3.98) which is significant at p=0.013 and National University of Modern Languages, Islamabad and International Islamic University Islamabad mean difference is (m= 2.54) which is significant at p= 0.041. The mean difference seen between Quaid-i-Azam University, Islamabad group with Federal Urdu University of Arts, Sciences &Technology, Islamabad is (m=4.06) which is significant at p= 0.002 and Quaid-i-Azam University, Islamabad and International Islamic University Islamabad mean difference is(m=2.62) which is significant at p= 0.001. There is significant mean difference between Riphah International University Islamabad and Federal Urdu University of Arts, Sciences &Technology, Islamabad is(m=4.02) which is significant at p= 0.042).

4.5.7 Ho19. There is no significant difference among different universities with reference to Debate.

Table 4.28

Analysis of Universities with reference to Debate dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Debate	Bahria University, Islamabad	22	19.95	298	4.823	.000
	COMSATS Institute of Information Technology ,Islamabad	57	20.49			
	Capital University of Science &Technology, Islamabad	13	24.00			
	Foundation University Islamabad	27	22.00			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	20.60			
	International Islamic University, Islamabad	70	20.50			
	National University of Modern Languages, Islamabad	27	19.70			
	Quaid-i-Azam University, Islamabad	52	23.21			
	Riphah International University Islamabad	16	20.68			

P <0.05

Table 4.28 shows F value (4.823) regarding the analysis of universities with reference to Debate dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null Hypothesis no19: “There is no significant difference among different universities with reference to debate dimension of creative climate” is rejected. There is a significant difference among different universities with reference to Debate dimension of Creative Climate. Table illustrates that Capital University of Science &Technology, Islamabad university has higher mean value (m=24.00) among other university, while the National University of Modern Languages Islamabad has a lower mean value (m=19.70) regarding Debate dimension of creative climate.

Post Hoc(Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to Debate dimension of creative climate. Creative Climate of sample universities has been shown in detail significant results below in table.

Table 4.29

Post Hoc Bonferroni Test

(I) University	(J) University	Mean Difference (I-J)	Sig.
Bahria University, Islamabad	COMSATS Institute of Information Technology ,Islamabad	-0.53	1.00
	Capital University of Science &Technology, Islamabad	-4.04	.051
	Foundation University Islamabad	-2.04	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-0.64	1.00
	International Islamic University, Islamabad	-0.54	1.00
	National University of Modern Languages Islamabad	0.25	1.00
	Quaid-i-Azam University, Islamabad	-3.25	.015
	Riphah International University Islamabad	-0.73	1.00
COMSATS Institute of Information Technology ,Islamabad	BAHRIA	0.53	1.00
	Capital University of Science &Technology, Islamabad	-3.50	.058
	Foundation University Islamabad	-1.50	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-0.10	1.00

	International Islamic University, Islamabad	-.008	1.00
	National University of Modern Languages Islamabad	0.78	1.00
	Quaid-i-Azam University, Islamabad	-2.72	.003
	Riphah International University Islamabad	-.196	1.00
	Bahria University, Islamabad	4.04	.051
	COMSATS Institute of Information Technology ,Islamabad	3.50	.058
Capital	Foundation University Islamabad	2.00	1.00
University of	Federal Urdu University of Arts, Sciences	3.40	.465
Science	&Technology, Islamabad		
&Technology,	International Islamic University, Islamabad	3.50	.049
Islamabad	National University of Modern Languages Islamabad	4.29	.016
	Quaid-i-Azam University, Islamabad	.788	1.00
	Riphah International University Islamabad	3.31	.502
	Bahria University, Islamabad	0.54	1.00
International	COMSATS Institute of Information Technology	.008	1.00
Islamic	,Islamabad		
University,	Capital University of Science &Technology,	-3.50	.049
Islamabad	Islamabad		
	Foundation University Islamabad	-1.50	1.00

	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-0.10	1.00
	National University of Modern Languages Islamabad	0.79	1.00
	Quaid-i-Azam University, Islamabad	-2.71	.002
	Riphah International University Islamabad	-0.18	1.00
	Bahria University, Islamabad	-.250	1.00
	COMSATS Institute of Information Technology ,Islamabad	-0.78	1.00
National University of Modern Languages Islamabad	Capital University of Science &Technology, Islamabad	-4.29	.016
	Foundation University Islamabad	-2.29	.695
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-0.89	1.00
	International Islamic University Islamabad	-0.79	1.00
	Quaid-i-Azam University, Islamabad	-3.50	.002
	Riphah International University Islamabad	-0.98	1.00
	Bahria University ,Islamabad	3.25	.015
Quaid-i-Azam University, Islamabad	COMSATS Institute of Information Technology ,Islamabad	2.72	.003
	Capital University of Science &Technology, Islamabad	-0.78	1.00
	Foundation University Islamabad	1.21	1.00

	Federal Urdu University of Arts, Sciences &Technology, Islamabad	2.61	.487
	International Islamic University Islamabad	2.71	.002
	National University of Modern Languages Islamabad	3.50	.002
	Riphah International University Islamabad	2.52	.519

P< 0.05

Post Hoc table 4.29 elaborate that there is significant mean difference between respondents of Bahria University, Islamabad and Quaid-i-Azam University, Islamabad is (m= -3.25) which is significant at p= 0.015. There is significant mean difference between COMSATS Institute of Information Technology Islamabad and Quaid-i-Azam University Islamabad is (m= - 2.72) which is significant at p= 0.003. Capital University of Science &Technology, Islamabad group is also significant mean difference between International Islamic University, Islamabad is (m= 3.50) which is significant at p= 0.049 and Capital University of Science &Technology, Islamabad and National University of Modern Languages Islamabad significant mean difference is (m= 4.29) which is significant at p= 0.016. There is significant mean difference seen in International Islamic University, Islamabad group with Capital University of Science &Technology, Islamabad is (m= -3.50) which is significant at p= 0.049, International Islamic University, Islamabad and Quaid-i-Azam University, Islamabad is also significant mean difference is (m= 2.71) which is significant at p= 0.002. National University of Modern Languages Islamabad group is also significant mean difference with Capital University of Science &Technology, Islamabad is(m=-4.29) which is significant at p= 0.016, and National University of Modern Languages Islamabad is significant mean difference with Quaid-i-Azam

University, Islamabad (m= -3.50) which is significant at p=0.002. There is significant mean difference between respondents of Quaid-i-Azam University, Islamabad and Bahria University ,Islamabad is(m= 3.25) which is significant at p= 0.015, Quaid-i-Azam University, Islamabad is also significant mean difference with COMSATS Institute of Information Technology ,Islamabad is(m= 2.72) which is significant at p= 0.003. There is significant mean difference between respondents of Quaid-i-Azam University Islamabad and National University of Modern Languages Islamabad (m= 3.50) which is significant at 0.002.

4.5.8 Ho20. There is no significant difference among different universities with reference to Playfulness/Humors.

Table 4.30

Analysis of Universities with reference to Playfulness/Humors dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Playfulness/ Humor	Bahria University, Islamabad	22	21.18	298	3.726	.000
	COMSATS Institute of Information Technology ,Islamabad	57	21.40			
	Capital University of Science &Technology, Islamabad	13	24.07			
	Foundation University Islamabad	27	21.77			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	21.20			
	International Islamic University, Islamabad	70	21.18			
	National University of Modern Languages, Islamabad	27	20.25			
	Quaid-i-Azam University, Islamabad	52	23.40			
	Riphah International University Islamabad	16	19.62			

P <0.05

Table 4.30 shows F value (3.726) regarding the analysis of universities with reference to Playfulness/Humor dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null Hypothesis no 20 “There is no significant difference among

different universities with reference to playfulness/humor dimension of creative climate" is rejected. There is a significant difference among different universities with reference to Playfulness/Humor dimension of Creative Climate.Table explains that Capital University of Science & Technology university has highest mean value (m=24.07) among other university, while the Riphah University Islamabad has a least mean value (m=19.62) regarding Playfulness/humor dimension of creative climate.

Post Hoc(Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to Playfulness/Humor dimension of creative climate. The sample universities have been shown in detail significant results below in table regarding playfulness/humor dimension of creative climate.

Table 4.31

Post Hoc Bonferroni Test

(I) Sample group	(J) Sample group	Mean Difference (I-J)	Sig.
Capital University of Science &Technology, Islamabad	Bahria University, Islamabad	2.89	.768
	COMSATS Institute of Information Technology ,Islamabad	2.67	.561
	Foundation University Islamabad	2.29	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	2.87	1.00
	International Islamic University, Islamabad	2.89	.282
	National University of Modern Languages, Islamabad	3.81	.062
	Quaid-i-Azam University, Islamabad	0.67	1.00
	Riphah International University Islamabad	4.45	.035
International Islamic University, Islamabad	Bahria University, Islamabad	.0039	1.00
	COMSATS Institute of Information Technology ,Islamabad	-0.21	1.00
	Capital University of Science &Technology, Islamabad	-2.89	.282
	Foundation University Islamabad	-0.59	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-0.01	1.00

	National University of Modern Languages, Islamabad	0.92	1.00
	Quaid-i-Azam University, Islamabad	-2.21	.029
	Riphah International University Islamabad	1.56	1.00
	Bahria University, Islamabad	2.22	.545
	COMSATS Institute of Information Technology ,Islamabad	2.00	.137
	Capital University of Science &Technology, Islamabad	-0.67	1.00
Quaid-i-Azam University, Islamabad	Foundation University Islamabad	1.62	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	2.20	1.00
	International Islamic University, Islamabad	2.21	.029
	National University of Modern Languages, Islamabad	3.14	.009
	Riphah International University Islamabad	3.77	.009
	Bahria University, Islamabad	-1.55	1.00
Riphah International University Islamabad	COMSATS Institute of Information Technology ,Islamabad	-1.77	1.00
	Capital University of Science &Technology, Islamabad	-4.45	.035
	Foundation University Islamabad	-2.15	1.00

	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-1.57	1.00
	International Islamic University, Islamabad	-1.56	1.00
	National University of Modern Languages, Islamabad	-0.63	1.00
	Quaid-i-Azam University, Islamabad	-3.77	.009

P< 0.05

Table 4.31 illustrates there is significant mean difference between Capital University of Science &Technology, Islamabad and Riphah International University Islamabad is (m= 4.45) which is significant at p= 0.035. There is also significant mean difference between respondents of International Islamic University, Islamabad and Quaid-i-Azam University, Islamabad is (m= -2.21) which is significant at p= 0.029. The group Quaid-i-Azam University, Islamabad is significant mean difference between Quaid-i-Azam University, Islamabad and International Islamic University, Islamabad is(m= 2.21) which is significant at p= 0.029. There is significant mean difference between Quaid-i-Azam University, Islamabad and National University of Modern Languages, Islamabad is(m= 3.14) which is significant at p= 0.009 , Quaid-i-Azam University, Islamabad is also significant mean difference with Riphah International University Islamabad (m= 3.77) which is significant at p=0.009. Table shows there is significant mean difference between respondents of Riphah International University Islamabad and Capital University of Science &Technology, Islamabad (m= -4.45) which is significant at p= 0.035, Riphah International University Islamabad is significant mean difference with Quaid-i-Azam University, Islamabad (m= -3.77) which is significant at p= 0.009.

4.5.9 Ho21. There is no significant difference among different universities with reference to Trust/Openness.

Table 4.32

Analysis of Universities with reference to Trust/Openness dimension of Creative Climate Results of ANOVA and Bonferroni Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Trust/ Openness	Bahria University, Islamabad	22	20.45	298	1.984	.048
	COMSATS Institute of Information Technology ,Islamabad	57	19.80			
	Capital University of Science &Technology, Islamabad	13	22.23			
	Foundation University Islamabad	27	21.33			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	21.53			
	International Islamic University, Islamabad	70	20.27			
	National University of Modern Languages, Islamabad	27	19.77			
	Quaid-i-Azam University, Islamabad	52	21.80			
	Riphah International University Islamabad	16	18.87			

P <0.05

Table 4.32 illustrates F value (1.984) regarding the analysis of universities with reference to Trust/Openness dimension of creative climate (p= .048) is significant at p< 0.05 level of significance, therefore the null Hypothesis no21:"There is no significant difference among

different universities with reference to trust/openness dimension of creative climate" is rejected. There is a significant difference among different universities with reference to Trust/Openness dimension of Creative Climate. Table shows that Capital University of Science &Technology, Islamabad university has higher mean value (m=22.23) among other university, while the Riphah International University Islamabad has a lower mean value (m=18.87) regarding Trust/Openness dimension of creative climate.

Post Hoc (Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to Trust/Openness dimension of creative climate. Creative Climate of sample universities has been shown in detail significant results below in table.

4.5.10 Ho22. There is no significant difference among different universities with reference to Dynamism/liveliness.

Table 4.33

Analysis of Universities with reference to Dynamism/liveliness dimension of Creative Climate. Results of ANOVA and Post Hoc(Bonferroni) test (N=299).

Variable	Universities	N	Mean	df	F	Sig.
Dynamism/ Liveliness	Bahria University, Islamabad	22	11.00	298	1.984	.048
	COMSATS Institute of Information Technology ,Islamabad	57	9.75			
	Capital University of Science &Technology, Islamabad	13	12.30			
	Foundation University Islamabad	27	10.96			
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	15	11.13			
	International Islamic University, Islamabad	70	10.52			
	National University of Modern Languages, Islamabad	27	10.14			
	Quaid-i-Azam University, Islamabad	52	11.23			
	Riphah International University Islamabad	16	9.00			

P <0.05

Table 4.33 elaborates F value (3.341) regarding the analysis of universities with reference to Dynamism /liveliness dimension of creative climate (p= .001) is significant at p< 0.05 level of significance, therefore the null Hypothesis no 22: “There is no significant difference among different universities with reference to dynamism/liveliness dimension of creative climate” is rejected. There is a significant difference among different universities with reference to Dynamism/liveliness dimension of Creative Climate. Table illustrates that Capital University of Science &Technology, Islamabad university has higher mean value (m=12.30) among other university, while the Riphah International University Islamabad has a least mean value (m=9.00) regarding Dynamism/liveliness dimension of creative climate.

Post Hoc (Bonferroni) Multiple Comparison test is applied to see the mean difference among different universities with reference to Dynamism/liveliness dimension of creative climate. Creative Climate of sample universities has been shown in detail significant results below in table.

Table 4.34

Post Hoc (Bonferroni) Test

(I) Sample group	(J) Sample group	Mean Difference (I-J)	Sig.
COMSATS Institute of Information Technology ,Islamabad	Bahria University Islamabad	-1.24	1.00
	Capital University of Science &Technology, Islamabad	-2.55	.025
	Foundation University Islamabad	-1.20	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-1.37	1.00
	International Islamic University, Islamabad	-0.77	1.00
	National University of Modern Languages, Islamabad	-0.39	1.00
	Quaid-i-Azam University, Islamabad	-1.47	.060
	Riphah International University Islamabad	0.75	1.00
Capital University of Science &Technology, Islamabad	Bahria University Islamabad	1.30	1.00
	COMSATS Institute of Information Technology ,Islamabad	2.55	.025
	Foundation University Islamabad	1.34	1.00
	Federal Urdu University of Arts, Sciences &Technology, Islamabad	1.17	1.00
	International Islamic University, Islamabad	1.77	.56

	National University of Modern Languages, Islamabad	2.15	.317
	Quaid-i-Azam University, Islamabad	1.07	1.00
	Riphah International University Islamabad	3.30	.011
	Bahria University Islamabad	-2.00	0.45
	COMSATS Institute of Information Technology ,Islamabad	-0.75	1.00
	Capital University of Science &Technology, Islamabad	-3.30	.011
Riphah International	Foundation University Islamabad	-1.96	0.38
University Islamabad	Federal Urdu University of Arts, Sciences &Technology, Islamabad	-2.13	.540
	International Islamic University, Islamabad	-1.52	0.85
	National University of Modern Languages, Islamabad	-1.14	1.00
	Quaid-i-Azam University, Islamabad	-2.23	.052

P< 0.05

Post Hoc table 4.34 shows there is significant mean difference between respondents of COMSATS Institute of Information Technology ,Islamabad and Capital University of Science &Technology, Islamabad (m= -2.55) which is significant at 0.025. There is also significant mean difference between Capital University of Science &Technology Islamabad and COMSATS Institute of Information Technology ,Islamabad (m= 2.55) which is significant at 0.025, Capital University of Science &Technology Islamabad is also significant mean difference with Riphah

International University Islamabad (m= 3.30) which is significant at p=0.011.Riphah International University Islamabad, group is significant with Capital University of Science &Technology, Islamabad (m= -3.30) which is significant at p= 0.011.

4.6 Summary

Chapter four enunciates details about the analysis and interpretation of study data. Introduction is given in the start of chapter. The first part of this chapter provide detail statistical and descriptively about the demographic part of study. The second part is about mean and Standard Deviation results of creative climate as a whole and results of creative climate dimensions. The third part of this chapter is (Analysis of public and private sector Universities with reference to Creative Climate) about testing null hypothesis through statistics Mann Whitney U test, to compare creative climate and dimensions of creative climate of public and private sector universities. The fourth part of this chapter is(Analysis of Universities with reference to Creative Climate) about testing null hypothesis through statistics, ANOVA Post HOC(Bonferroni) test to compare different universities(public and private) with reference to creative climate and dimensions of creative climate. The results of testing null hypothesis are described and interpret in this chapter.

Table 4.35

Analysis of public and private sector universities with reference to Creative Climate(Higher to Lower).

Universities	**Sectors**	**Means**	**M(M)**	**SD**
Capital University of Science &Technology, Islamabad	Private	229.23	3.88	26.48
Quaid-i-Azam University, Islamabad	Public	217.86	3.69	19.17
Foundation University, Islamabad	Private	208.48	3.53	24.04
Bahria University ,Islamabad	Public	207.27	3.51	16.97
COMSATS Institute of Information Technology, Islamabad	Public	205.12	3.47	20.19
Riphah International University Islamabad	Private	204.18	3.46	18.55
National University of Modern Languages, Islamabad	Public	202.07	3.42	34.11
International Islamic University, Islamabad	Public	202.04	3.42	29.28
Federal Urdu University of Arts, Sciences &Technology Islamabad	Public	196.86	3.33	27.65

Table 4. 36

Comparative analysis of public and private sector universities with reference to Creative Climate ten dimensions.

Creative Climate Dimensions		**Public Sector**						**Private Sector**		
		Bahira	NUML	COMSATS	QIAU	FUUAST	IIUI	CUST	Foundation	Riphah
Idea Time	**Mean**	30.13	25.44	29.63	30.03	27.46	28.62	31.76	28.81	30.43
Risk Taking	**Mean**	13.77	14.81	14.75	15.17	12.66	14.08	16.00	15.03	14.75
Challenge	**Mean**	36.04	33.55	35.61	35.36	33.33	34.08	37.46	34.77	38.18
Freedom	**Mean**	20.36	20.55	19.82	20.03	18.06	20.17	23.53	20.51	17.75
Idea Support	**Mean**	21.81	23.29	20.68	23.00	20.33	20.61	24.92	20.88	20.31
Conflict	**Mean**	12.54	14.51	13.15	14.59	10.53	11.97	12.92	12.37	14.56
Debate	**Mean**	19.95	19.70	20.49	23.21	20.60	20.50	24.00	22.00	20.68
Playfulness /Humors	**Mean**	21.18	20.25	21.40	23.40	21.20	21.18	24.07	21.77	19.62
Trust/ Openness	**Mean**	20.45	19.77	19.80	21.80	21.53	20.27	22.23	21.33	18.87
Dynamism/ Liveliness	**Mean**	11.00	10.14	9.75	11.23	11.13	10.52	12.30	10.96	9.00

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Chapter five throw light information about summery, findings and discussions of the study, Conclusion, recommendations, significance and suggestions in comprehensive way.

5.1 Summary

The prime objective of the study was comparative analysis of public and private sector universities of Islamabad Capital Territory with reference to creative climate. The major objectives of the study were to compare the creative climate of public and private sector universities, to compare the creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, to compare different universities with reference to creative climate, to compare different universities with reference to creative climate dimensions(idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness).

The study population was all the universities having faculty members of Social Sciences and Management Sciences of Islamabad Capital Territory. For selecting sampling of research, proportionate stratified random sampling method was applying. Each stratum was given an equal chance, fifty percent faculty members form public and private sector universities (Social Sciences and Management Sciences) was selected as a sample of study. Two hundred and forty

three faculty members of universities respondents were participated from public sector universities where as fifty six private universities faculty respondents from Islamabad in present research. The study was divided into two major parts. The first part of study comprises pilot testing procedure of research questionnaire. The second part of this research based on the main study. The pilot testing of research questionnaire was conducted on the responses of eighty eight faculty members of two Islamabad universities, which are Air University Islamabad (public sector) and National University of Computer & Emerging Sciences, Islamabad (private sector). Reliability of research questionnaire was determined by Chronbach's Alpha reliability method. The second part of study was based on main study. Where two hundred and ninety nine university faculty members responds from public and private sectors universities were included in the following study. The data of study was collected from university faculty members of six public and three private sector universities of Islamabad Capital Territory. The public sector universities included: International Islamic University, National University of Modern Languages, Bahria University Islamabad, COMSATS Institute of Information Technology, Federal Urdu University of Arts, Sciences &Technology and Quaid –i-Azam University. The universities from private sector were: Capital University of Science & Technology, Foundation University Islamabad and Riphah International University Islamabad.

Questionnaire was used as instrument of this study to collect data. The developed questionnaire consists 59 items based on Ekvill's ten creative climate dimensions' model. The questionnaire validity was analyzed by educational experts and sentence structure of questionnaire analyzed by language expert. The reliability of tool was analyzed by pilot testing. The Chronbach's Alpha reliability of the creative climate questionnaire was value .918. Researcher personally visited and gathers responses from selected sample of the study. After by getting the permission of

respective universities, faculty members of university was meet by researcher herself. The responses of respondents were collected through questionnaire from universities faculties.

The study data was analyzed by SPSS 21 software. Alpha reliability used to check the reliability of research questionnaire, while frequency, percentage, mean and SD used for demographic variables, Mann Whitney U test and ANOVA Post HOC (Bonferroni) used for hypothesis testing. The hypothesis of study was tested by calculated means, SD, Mann Whitney U test and ANOVA Post HOC (Bonferroni). At the end conclusion, findings and discussion drown on the basis of study data.

5.2 Findings

5.2.1Part – I Demographics of Respondents

The demographic statistics of the respondents of current study provide some basic information of the respondents. This demographic information provides some basic details about respondents and organizations so it's important to discuss this data here in findings.

1. Table no 4.1 be evidence for that there was two hundred and ninety nine university faculty respondent's response from six public and three private sector universities of Islamabad territory.
2. Table no 4.2 describe that there is 299 university faculty members are sample of study. 243 respondent's response from 6 public sector universities of Islamabad. This comprises 81.3% of total sample of this research. There was 56 respondent's response from 3 private sector universities of Islamabad. This comprises 18.7% of present research.

3. It is revealed from table no 4.3 that majority (51.8%) respondent response from Social Sciences faculties while 48.2% responses came from faculty of Management Sciences. This explains that majority of respondents of sample was from Social Sciences faculty.
4. It was also described (table no 4.4) that (56.2%) of the respondents of sample were male moreover 43.8 % respondents were female university faculty. This shows that majority of male university faculty response to creative climate study as compare to female respondents.
5. It was also shown from demographic details (table no 4.5) that (28.8%) of the respondents' of sample response from experience group 11 to 15 years of teaching experience at university level. As for as (26.8 %) response came from experience group 6 to 10 years of teaching experience. However, (23.1%) from 1to 5 years and(21.4) respondents' response from More teaching experience category. This shown that majority of respondents of study was from group 11 to 15 years teaching experience faculty of universities.

5.2.2 Part-II Analysis of Creative Climate and its dimensions

6. Table No 4.6 results shown that overall Creative Climate of Universities mean was 207.38(mean of the mean was = 3.51) and SD result was 25.47. Results of means show that universities are high in challenge (3.89), idea time (3.63), playfulness/ humor (3.60), idea support (3.59), debate (3.52), dynamism and liveliness (3.52), trust/openness (3.43), freedom (3.34), conflict (3.26) and risk taking (2.91) dimension.

7. The results of table 4.7 show that overall private sector universities have good creative climate (mean= 212.07) as compare to public sector universities creative climate (mean= 206.30). In dimensions wise results of mean value indicate that public sector universities were high in challenge dimension (mean=34.79) and lower in risk taking dimension (mean=14.44). Private sector university results of mean value also indicate that universities were high in challenge dimension (mean=36.37) and lower in risk taking dimension (mean=15.17).

5.2.3 Part –III Testing Null Hypotheses

Objective NO 1"To compare the public and private sector universities with reference to creative climate".

8. Table no 4.8 illustrate that (Z=-1.121 , p= .262) was not statistically significant at p< .05 level. Thus there was no statistical significant difference found between public and private sector universities with reference to creative climate.

Objective No 2"To compare the creative climate dimensions (idea time,risk taking, challenges, freedom, idea support, conflict, debate ,playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities".

9. Table No 4.9 results express that (Z value = -.996, p = .319) statistically insignificant at 0.05 alpha level. Hence there was no significant difference found between public and private sector universities idea time dimension of creative climate.
10. There was no significant difference found (p value=.126) in risk taking dimension of creative climate in public as well as private sector universities (Table No.4.10).

11. Results of table 4.11 express that there was no significant (p value= .082) difference exists among public and private sector universities regarding challenge dimension of creative climate.
12. It was also revealed from the results of (Table no.4.12) that there was no significant difference present in freedom dimension of creative climate at p value (.555) between universities of both sectors (public and private).
13. The results of (z value= -1.017, p= .309.) does not found significant difference in the idea support dimension of creative climate between universities of public and private sector (Table No.4.13).
14. Table No.4.14 illustrate that the value of (p value= .681) statistically insignificant at 0.05 alpha level. Accordingly to the results, there was no significant exists between the level of creative climate conflict dimension at public and private sector universities.
15. Results of (table.4.15) revealed that there was no significant difference (z value=-1.489,p=.137) found between public and private sector universities regarding creative climate debate dimension.
16. The z value (-.190), p= -.849) at (0.05) level was statistically found insignificant. Thus there was no significant difference between the creative climate playfulness/humors dimension in public and private sector universities (table no.4.16).
17. According to table No 4.17 results the z tests (z value=-.469, p= -.639) statistically not significant. So there was no significant difference to be present

between the creative climate trust/openness and dimension in public and private sector universities.

18. It was also shown in the results of table no 4.18 that there was no significant difference seen in dynamisms/ liveliness dimension of creative climate at(z value =-.670 , p= -.503) at (0.05) level of significance, between public and private sector universities.

5.2.4 Part –IV Analysis of different universities with reference to Creative Climate.

Objective NO 3 "To compare different universities with reference to creative climate".

19. Table 4.19 shows F value (3.456) regarding the analysis of universities with reference to creative climate (p= .001) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to creative climate is rejected. There is a significant difference between universities with reference to creative climate.

Objective No 4"To compare different universities with reference to creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness)".

20. Table 4.21 shows F value (2.148) regarding the analysis of universities with reference to Idea time dimension of creative climate (p= .032) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Idea Time dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Idea Time dimension of Creative Climate.

21. Table 4.22 illustrate F value (1.327) regarding the analysis of universities with reference to Risk Taking dimension of creative climate (p= .229) is not significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Risk Taking dimension of Creative Climate is fail to rejected. There is no significant difference among different universities with reference to Risk Taking dimension of Creative Climate.
22. Table 4.23 demonstrate F value (2.197) regarding the analysis of universities with reference to Challenge dimension of creative climate (p= .028) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is significant difference among different universities with reference to Challenge dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Challenge dimension of Creative Climate.
23. Table 4.24 shows that F value (1.631) regarding the analysis of universities with reference to Freedom dimension of creative climate (p= .116) is not significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Freedom dimension of Creative Climate is failed to reject. There is no significant difference among different universities with reference to Freedom dimension of Creative Climate.
24. Table 4.25 explains F value (2.395) regarding the analysis of universities with reference to Idea Support dimension of creative climate (p= .016) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no

significant difference among different universities with reference to Idea Support dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Freedom dimension of Creative Climate.

25. Table 4.26 elaborate F value (4.425) regarding the analysis of universities with reference to Conflict dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Conflict dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Conflict dimension of Creative Climate
26. Table 4.28 shows F value (4.823) regarding the analysis of universities with reference to Debate dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Debate dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Debate dimension of Creative Climate.
27. Table4.30 shows F value (3.726) regarding the analysis of universities with reference to Playfulness/Humor dimension of creative climate (p= .000) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Playfulness/Humor dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Playfulness/Humor dimension of Creative Climate.

28. Table 4.32 illustrates F value (1.984) regarding the analysis of universities with reference to Trust/Openness dimension of creative climate (p= .048) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Trust/Openness dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Trust/Openness dimension of Creative Climate.
29. Table 4.33 elaborates F value (3.341) regarding the analysis of universities with reference to Dynamism /liveliness dimension of creative climate (p= .001) is significant at p< 0.05 level of significance, therefore the null hypothesis that there is no significant difference among different universities with reference to Dynamism/liveliness dimension of Creative Climate is rejected. There is a significant difference among different universities with reference to Dynamism/liveliness dimension of Creative Climate.

5.3 Discussion

This study was conducted to find out the comparative analysis of universities with reference to creative climate. The research objectives were to compare the public and private sector universities with reference to creative climate, to compare the different creative climate dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) in public and private sector universities, to compare different universities with reference to creative climate, to compare different universities with reference to creative climate dimensions(idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and

dynamism/liveliness). This study was proposed for testing hypotheses which ware based on study objectives.

The study results revealed that there was no significant difference between public and private sector universities with reference to creative climate. Although creative climate is equally important for both public and private sector universities. As Hicklin et al (2009), have supported that collaborative and shared climate of university is essential for both public and private universities.

On the hand, study results explained that there was significant difference found among different (sample) universities with reference to creative climate. The reasons behind these results may be this, although Capital University of Science & Technology University Islamabad (a private sector university)found highest creative climate (m= 229.23) and Quaid-i-Azam University Islamabad (a public sector university) found second highest creative climate (m=217.86) among sample universities, but the other universities creative results may affect their sector group results, like two other private sector universities like Foundation university Islamabad (m=208.48) and Riphah International University Islamabad (m=204.18) affect private sector results and five private sector universities like Foundation University, Islamabad (m=208.48), Bahria University ,Islamabad (m= 207.27), COMSATS Institute of Information Technology University Islamabad (m=205.12), National University of Modern Languages Islamabad (m= 202.07) ,International Islamic University Islamabad (m=202.04)and Federal Urdu University of Arts, Sciences & Technology Islamabad (m= 196.86) may affect public sector results. This might be reasons that universities found significant results among universities but did not found significant results in public and private sectors. Universities either private or public sector, plays a vital role on teachers personality as well as on work quality. As Swar, Malik, & Jumani (2021)

study justified that university faculty member, self assurance enhanced in a highly cooperative organizational climate.

The study results elaborate that there was no significant difference between public and private sector universities with reference to creative climate ten dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) on the other side Idea time, challenge, idea support, conflict, debate, playfulness/ humor, trust/openness and dynamism/ liveliness dimensions of creative climate found significant difference among different universities, while risk taking and freedom dimensions of creative climate did not found significant difference among universities.

The study results revealed that there was no significant difference between public and private sector universities, as well as there was no significant difference among different universities with reference to freedom dimension. In a creative climate organization freedom is giving autonomy to individuals to set their work goals and to do work in their own style. As results of Rabbani, & Sarmad (2018), explained that freedom gives confidence to individuals to do work in their own way and it increase creativity.

A high challenging climate motivates individuals to contribute to organizational goals, vision and operations. The study results expressed that there was significant difference among different universities but there was no significant difference between public and private sector universities with reference to challenge dimension of creative climate. Fomujang, Cisheng Wu and Tassang(2019), study results find same results that giving work tasks against employees interests make them displeasure and de-motivated towards their jobs or organization.

Risk taking refers to the giving response to opportunities in high risk and taking initiatives in unknown outcomes. The study results shown that there was no significant difference between

public and private universities and also there was no significant difference among different universities with reference to risk taking dimension of creative climate. The reason of this result may be lack of organizational support provide to faculty members or may be the fear to lose their jobs in any mishap. As Garcia-Granero et al,(2015)claims that individuals' willingness to experiments and implicate a creative idea indicates a climate that support risk taking.

It was also concluded from study results that there was no significant difference between public and private sector universities while there was significant difference among different universities with reference to idea support dimension of creative climate. The study Al-Zoubi & Alfandi (2021) supported that employees working in a supportive climate have more tendency to loyal their organization.

The results about idea time dimension of creative climate portrait that the faculty members of public and private sector universities did not have enough time to think about creative ideas. The reasons of these results may be due to work load and time pressure on university faculty members.

Results of current study reveal that there was a significant difference among different universities but there was no significant difference observes in public and private sector universities with reference to debate dimension of creative climate. It means that faculty members of public and private sectors did not found a healthy debate climate in their university. There may be many reasons of these results. May be faculty does not found their universities comfortable climate to share and discussed creative ideas. May be faculty does not healthy debate on a creative idea as they feel that their universities does not respect and appreciate their ideas. As the Iqbal (2011), has also supported the views that it may be another reason that faculties have a work load and did not enough time to think and discussed a creative ideas. Lack

of trust between colleagues, staff and organization may be a reason of these results. May be faculty did not have trust on their colleagues to discussed their ideas with them. As the results of this study also elaborates that there was significant difference among universities, while there was no significant difference between public and private sector universities with reference to trust dimension of creative climate. Trust and openness between colleagues and management encourage faculty to share their views about creative ideas freely. The results also supported Ling Tan, & Yan Ho. (2015) that openly sharing and discussing creative ideas with colleagues supported in a trust and openness climate which enhance their creative work.

5.4 Conclusions

The purpose of study was to investigate the extent to which the climates of universities were creative. It is actually a exploratory study to conduct to check either the targeted public and private sector universities have creative climate or not? If the universities have creative climate, then on which extent they are creative. After the findings of the study it was concluded that there was no significant difference found of creative climate and its ten dimensions in public and private sector universities at significant alpha 0.05. The limitations of this research may become the reasons of its results. The one limitation was a low rate of questionnaires return and the other limitation was a huge difference of sample size between two stratum(public and private).

The most of respondents' response from public sector universities as compare to private sector universities of Islamabad Capital Territory.51.8% respondents came from social science while 48.2% came from management sciences university faculties of public and private sector. Results of research elaborate that from sample 56.2% male respondents of study as well as 43.8% female universities faculty respondents' response. Majority of eleven to fifteen years of teaching experience respond toward this study which was 28.8% of the study sample. While only 21.4%

of study sample responses ware came from ‘’More’’ section, universities faculties whom teaching experience more than fifteen years of teaching experience.

The overall creative climate of universities of Islamabad territory found mean value (Mean=3.51).In dimensions’ wise comparison, results of mean value indicate that universities are high in challenge (3.89) and lower in risk taking (2.91). In highest to lowest men results, Challenge(3.89), Idea Time (3.63), Playfulness/Humor(3.60), Idea Support (3.59),Dynamism/Liveliness(3.52),Debate(3.52),Trust/Openness(3.43),Freedom(3.34),Conflict(3 .26) and Risk taking(2.91).It was concluded that there was no significant difference between public and private sector universities as reference to creative climate(p value = .262).The creative climate idea time dimension result (p value = .319)explain that there was no significant difference between private and public sector regarding creative climate idea time dimension. There was no significant difference seen between public and private sector universities in the context of creative climate risk taking dimension (p= .126). Regarding to challenge creative climate dimension there was no significant difference found between public and private sector universities(p value = .082). There was no significant difference seen in creative climate freedom dimension of public and private sector universities of Islamabad territory. In the perspective of conflict result, it was found that there was also insignificant difference between the responses of public and private sector universities (p value= .681).The creative climate debate dimension (p result= .137) found in significant between public and private sector universities. There was insignificant difference seen in the playfulness/humor dimension of creative climate in public and private sector universities of Islamabad territory. The creative climate dimension trust/openness was seen no significant difference between public and private sector universities. There was no significant difference in public and private sector universities with regarding to

creative climate dynamism and liveliness dimension. There was no significant difference between mean results of dynamism/liveliness creative climate dimension of public and private sector universities.

After this study it has been concluded that neither the climate of public sector not the climate of private sector universities is creative. It is at the moderate level of creative climate. It has been concluded that comparatively private sector universities are slightly better than public sector universities but as par statistical significant there was no difference found between public and private sector universities with reference to creative climate. If the universities want to compete the world then, there is need for both sectors to work on improving climate of universities with reference to creativity.

It has been concluded that there was significant difference among different universities with reference to creative climate. Idea time, challenge, idea support, conflict, debate, playfulness/ humor, trust/openness and dynamism/ liveliness dimensions of creative climate found significant difference among different universities, while risk taking and freedom dimensions of creative climate did not found significant difference among universities.

It has been concluded that at public and private sector comparison, there was no significant difference found at significant level 0.05. But there was significant difference found among different universities with reference to creative climate. Capital University Science & Technology, Islamabad (Private sector) found highest creative climate(m=3.88) while Quaid-i-Azam University, Islamabad (Public sector) found second highest creative climate(m=3.69) and Federal Urdu University of Arts , Science & Technology Islamabad (Public sector) found least creative climate(m=3.33) among sample universities of Islamabad Capital Territory.

5.5 Recommendations

It was found from findings of study that universities are on moderate level in terms of creative climate. Universities need to improve their climate, while focusing on all dimensions (idea time, risk taking, challenges, freedom, idea support, conflict, debates, playfulness/humors, trust/openness and dynamism/liveliness) of creative climate.

Following recommendations are given to enhance the level of creative climate of universities.

1. Department / Faculty level meetings may be hold on regular basis where faculty members are given opportunities to share their creative ideas/ practical suggestions for the improvement and functions of department and university.
2. Debate, workshops, conferences and seminars may be arranged where doable strategies are recommended for the universities.
3. Universities level committees may be formulated to suggest certain measures in line with creative climate
4. Those universities with comparatively lower level of creative climate may have consultation with those universities which have higher level of creative climate for improvement of their climate.
5. This study explores only public and private sector universities of Islamabad Capital Territory. The future researcher may extend this topic to broader geographical area.
6. This study is thoroughly based on quantitative technique and in future researches may be carried out on qualitative bases and mixed methods as well.

Table 5.1

Alignment of Findings with Recommendations

Findings	**Recommendations**
A significant difference was found among different universities with reference to creative climate.	Those universities with comparatively lower level of creative climate may have consultation with those universities which have higher level of creative climate for improvement of their climate. .
Universities varied significantly in terms of different dimensions of creative climate including; Idea time, challenge, idea support, conflict, debate, playfulness/ humor, trust/openness and dynamism/ liveliness.	Department / Faculty level meetings may be hold on regular basis where faculty members are given opportunities to share their creative ideas/ practical suggestions for the improvement and functions of department and university. Debate, workshops, conferences and seminars may be arranged where doable strategies are recommended for the universities. Universities level committees may be formulated to suggest certain measures in line with creative climate.

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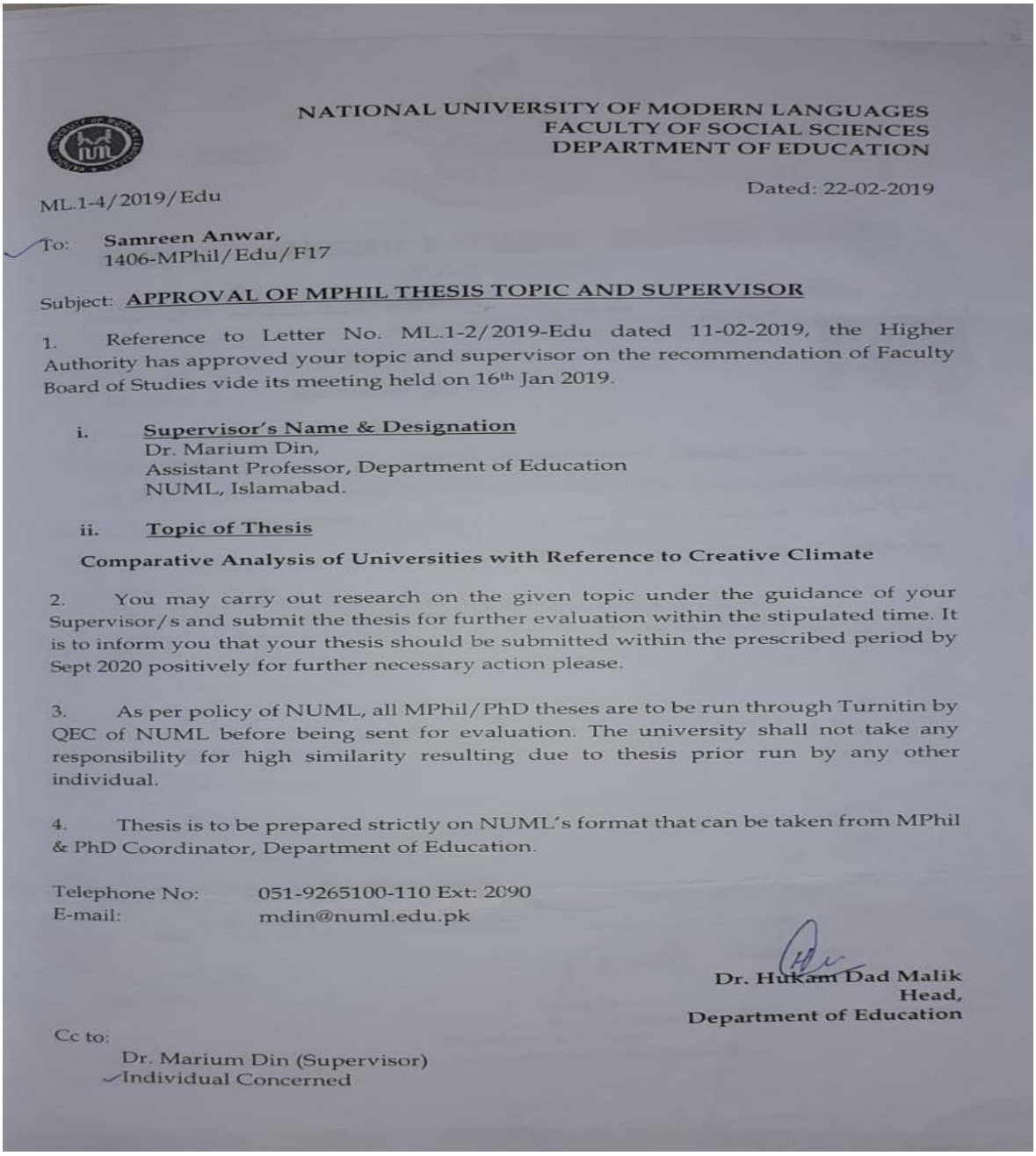
Appendix A

Topic Approval Letter



NATIONAL UNIVERSITY OF MODERN LANGUAGES
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF EDUCATION

ML.1-4/2019/Edu

Dated: 22-02-2019

To: **Samreen Anwar,**
1406-MPhil/Edu/F17

Subject: **APPROVAL OF MPHIL THESIS TOPIC AND SUPERVISOR**

1. Reference to Letter No. ML.1-2/2019-Edu dated 11-02-2019, the Higher Authority has approved your topic and supervisor on the recommendation of Faculty Board of Studies vide its meeting held on 16th Jan 2019.

i. **Supervisor's Name & Designation**
Dr. Marium Din,
Assistant Professor, Department of Education
NUML, Islamabad.

ii. **Topic of Thesis**

Comparative Analysis of Universities with Reference to Creative Climate

2. You may carry out research on the given topic under the guidance of your Supervisor/s and submit the thesis for further evaluation within the stipulated time. It is to inform you that your thesis should be submitted within the prescribed period by Sept 2020 positively for further necessary action please.

3. As per policy of NUML, all MPhil/PhD theses are to be run through Turnitin by QEC of NUML before being sent for evaluation. The university shall not take any responsibility for high similarity resulting due to thesis prior run by any other individual.

4. Thesis is to be prepared strictly on NUML's format that can be taken from MPhil & PhD Coordinator, Department of Education.

Telephone No: 051-9265100-110 Ext: 2090
E-mail: mdin@numl.edu.pk

Dr. Hukam Dad Malik
Head,
Department of Education

Cc to:
Dr. Marium Din (Supervisor)
Individual Concerned

Appendix B

Distribution of Respondents According to Universities

No	Universities	Frequency	Percent
1	Bahria University	22	7.4
2	COMSATS Institute of Information Technology	57	19.1
3	Capital University of Science & Technology(CUST)	13	4.3
4	Foundation University	27	9.0
5	Federal Urdu University of Arts, Sciences & Technology(FUUAST)	15	5.0
6	International Islamic University (IIU)	70	23.4
7	National University of Modern Languages (NUML)	27	9.0
8	Quaid –i-Azam University (QAU)	52	17.4
9	Riphah **I**nternational University	16	5.4
	Total	**299**	**100.0**

Appendix C

Sample Size obtained from (Targeted Population) Universities

No	University Name	Sector	Population	Sample (50%)
1	International Islamic University	Public	156	78
2	National University of Modern Languages	Public	126	63
3	Bahria University	Public	180	90
4	COMSATS Institute of Information Technology	Public	188	94
5	Federal Urdu University of Arts, Sciences & Technology	Public	42	21
6	Quaid –i-Azam University	Public	108	54
7	Capital University of Science & Technology	Private	48	24
8	Foundation University, Islamabad	Private	106	53
9	Riphah International University	Private	36	18
Total			**990**	**495**

Appendix D

List of Population

Universities (having Faculty of Social Sciences and Faculty of Management Sciences) in Islamabad Capital Territory

No	University Name	Sector	Population
1	International Islamic University	Public	156
2	National University of Modern Languages	Public	126
3	Bahria University	Public	180
4	COMSATS Institute of Information Technology	Public	188
5	Federal Urdu University of Arts, Sciences & Technology	Public	42
6	Quaid –i-Azam University	Public	108
7	Capital University of Science & Technology	Private	48
8	Foundation University, Islamabad	Private	106
9	Riphah international University	Private	36
10	Air University	Public	52
11	National University of Computer & Emerging Sciences	Private	52
Total			**1094**

Appendix E

HEC list of General Universities in Islamabad Capital Territory

No	Name	Sector	Discipline	Location
1	Capital University of Science & Technology	Private	General	Islamabad Capital Territory
2	Foundation University, Islamabad	Private	General	Islamabad Capital Territory
3	Muslim Youth University	Private	General	Islamabad Capital Territory
4	National University of Computer & Emerging Sciences	Private	General	Islamabad Capital Territory
5	Riphah International University	Private	General	Islamabad Capital Territory
6	Shifa Tameer-e-Millat University	Private	General	Islamabad Capital Territory
7	Sir Syed (CASE) Institute of Technology, Islamabad	Private	General	Islamabad Capital Territory
8	Air University	Public	General	Islamabad Capital Territory
9	Allama Iqbal Open University	Public	General	Islamabad Capital Territory
10	Bahria University	Public	General	Islamabad Capital Territory
11	COMSATS Institute of Information Technology	Public	General	Islamabad Capital Territory
12	Federal Urdu University of Arts, Sciences & Technology	Public	General	Islamabad Capital Territory
13	Institute of Space Technology& Technology	Public	General	Islamabad Capital Territory
14	International Islamic University Islamabad	Public	General	Islamabad Capital Territory
15	National University of Modern Languages, Islamabad	Public	General	Islamabad Capital Territory
16	National University of Sciences & Technology	Public	General	Islamabad Capital Territory
17	Pakistan Institute of Development Economics (PIDE)	Public	General	Islamabad Capital Territory

18	Pakistan Institute of Engineering & Applied Sciences	Public	General	Islamabad Capital Territory
19	Quaid-i-Azam University	Public	General	Islamabad Capital Territory
20	Pakistan Institute of Development Economics (PIDE)	Public	General	Islamabad Capital Territory

Appendix F

Covering Letter for Tool Validation

Cover Letter for Validity Certificate

COMPARATIVE ANALYSIS OF UNIVERSTIES WITH REFERENCE TO CREATIVE CLIMATE

Subject **Request for Validity**

Respected Sir/Madam,

I have attached my questionnaire for the purposes of research titled as "Comparative Analysis of Universities with reference to Creative Climate".

Creative Climate of Universities

Questionnaire is based on "Ekval's Creative Climate" model. The model has ten dimensions. Questionnaire consisted 70 items on these ten dimensions.

1. Idea Time
2. 2.Risk Taking
3. Challenge
4. Freedom
5. Idea Support
6. Conflict
7. Debates
8. Playfulness/Humor
9. Trust/Openness
10. Dynamism/ Liveliness

Appendix G

Proof Reading Certificate for Research Instrument

COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE

TO WHOME IT MAY CONCERN

Subject: Proof Reading of Research Instrument

It is stated that I have carried out proof reading of the questionnaire developed by Ms, Samreen Anwar, M Phil scholar, Reg No. 1406-MPhil/Edu/F17, for the topic "Comparative Analysis of Universities with Reference to Creative Climate". I observed each statement of questionnaire attentively and corrected few mistakes where it was required.

Now the research questionnaire is valid for data collection after certain amendments.

Tariq Mehmood

Sr. Subject Specialist (English)

QAED H-9 Islamabad

Subject Specialist
Govt. College for Elementary
Teacher H-9
Islamabad

Appendix H

Validation of Research Instrument Certificate

COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE

TO WHOME IT MAY CONCERN

Subject: Validation of Research Instrument

It is stated that I have reviewed the questionnaire developed by Ms, Samreen Anwar, M Phil scholar, Reg No. 1406-MPhil/Edu/F17, for the topic "Comparative Analysis of Universities with Reference to Creative Climate". The research instrument is valid for data collection after certain modifications.

Name Rehana Ali Shan

Designation SS (Education)

Institute QAED Islamabad

Signatures

Subject Specialist
Govt. College for Elementary
Teacher H-9
Islamabad

COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE

TO WHOME IT MAY CONCERN

Subject: Validation of Research Instrument

It is stated that I have reviewed the questionnaire developed by Ms, Samreen Anwar, M Phil scholar, Reg No. 1406-MPhil/Edu/F17, for the topic "Comparative Analysis of Universities with Reference to Creative Climate". The research instrument is valid for data collection after certain modifications.

Name Dr. Qurat-ul-Ain

Designation Assistant Professor.

Institute NUML Islamabad

Signatures

COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE

TO WHOME IT MAY CONCERN

Subject: Validation of Research Instrument

It is stated that I have reviewed the questionnaire developed by Ms, Samreen Anwar, M Phil scholar, Reg No. 1406-MPhil/Edu/F17, for the topic "Comparative Analysis of Universities with Reference to Creative Climate". The research instrument is valid for data collection after certain modifications.

Name Dr. Farkhanda Tabassum
Designation Assistant Professor
Institute NUML Islamabad
Signatures

Appendix I

Certificate of Proof Reading

June 22, 2021

Certificate of Proofreading

It is certified that I have read the thesis titled, **"Comparative Analysis of Universities with Reference to Creative Climate"**, written by **Samreen Anwar**. The thesis is grammatically correct; it is syntactically and morphologically up to the mark and may be further considered for evaluation and degree awarding, according to my knowledge and understanding of English language and literature.

Syed Tanveer Hayat
SS (English) BS-17
GHSS Mastuj, Chitral

Syed Tanveer Hayat
Subject Specialist English
Department of Education KP

Appendix J

Creative Climate of Universities Questionnaire

Research Instrument

Serial No: --------

COMPARATIVE ANALYSIS OF UNIVERSITIES WITH REFERENCE TO CREATIVE CLIMATE (CCUQ)

Dear Respondent,

I am M.Phil Scholar (Education) working on my research work on the above mentioned topic. You are requested to read the questionnaire thoroughly and respond to the items. I assure you that your responses will be highly protected.

Samreen Anwar

(samreentiwana5@gmail.com)

M.Phil Scholar (Education)

Department of Education

National University of Modern Languages, Islamabad

Section 1: Demographic Information

a	**University Name**				
b	**University's Sector**	Public		Private	
c	**Faculty**	Social Sciences		Management Sciences	
d	**Gender**	Male		Female	
e	**Experience**	1-5 years	6-10 years	11-15 years	More

Section 2: Creative Climate

Directions: The following statements are about your university; please indicate the extent to which each statement characterizes your university on the scale of Strongly Disagree to Strongly Agree.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1	**Idea Time**					
My university:		**SD**	**D**	**N**	**A**	**SA**
IT 1	Gives reasonable amount of time to new ideas.	1	2	3	4	5
IT 2	Encourages individuals to conceive new ideas.	1	2	3	4	5
IT 3	Provides enough time to elaborate creative ideas	1	2	3	4	5
IT 4	Gives individuals the opportunities to put creativity in work.	1	2	3	4	5
IT 5	Allows switching work towards new ideas.	1	2	3	4	5
IT 6	Provides possibilities to discuss new ideas.	1	2	3	4	5
IT 7	Allows people to think about experiments in different alternative tasks.	1	2	3	4	5
IT 8	Provides a chance to use new ideas instead of rule of thumb.	1	2	3	4	5
2	**Risk Taking**					
In my university:		**SD**	**D**	**N**	**A**	**SA**
RT1	People feel bold to take initiatives for creativity even when outcomes are unclear.	1	2	3	4	5
RT2	People go forward to bring new ideas even in all situations.	1	2	3	4	5

RT3	Creative ideas are adopted and implemented rapidly.	1	2	3	4	5
RT4	Risk taking is encouraged.	1	2	3	4	5
RT5	Individuals are confident to a make decision on their new ideas for creativity.	1	2	3	4	5
3	**Challenge**					
In my university:		**SD**	**D**	**N**	**A**	**SA**
CH1	People are dedicated towards their daily work goals.	1	2	3	4	5
CH2	People are committed to their jobs.	1	2	3	4	5
CH3	Majority of individuals are motivated towards their jobs.	1	2	3	4	5
CH4	People consider their work as meaningful.	1	2	3	4	5
CH5	People enjoy to contribute in the success of the university.	1	2	3	4	5
CH6	People take interest to work on creative ideas.	1	2	3	4	5
CH7	Work atmosphere is full of energy.	1	2	3	4	5
CH8	People attempt to do a good job.	1	2	3	4	5
CH9	People are concerned to improve the quality of work.	1	2	3	4	5
4	**Freedom**					
In my university:		**SD**	**D**	**N**	**A**	**SA**
FD1	People have freedom to take initiatives for sharing information to their day- to -day activities.	1	2	3	4	5
FD2	Individuals have a freedom to take their own decision.	1	2	3	4	5
FD3	People have their own choice about their daily work.	1	2	3	4	5
FD4	People can take their own initiative for creativity.	1	2	3	4	5
FD5	People tend to define their own work projects.	1	2	3	4	5
FD6	People have freedom to experiment different ideas.	1	2	3	4	5
5	**Idea Support**					
My university		**SD**	**D**	**N**	**A**	**SA**

IS 1	Welcomes creative ideas.	1	2	3	4	5
IS 2	Provides support to individuals for new ideas.	1	2	3	4	5
IS 3	Facilitates individuals to bring creativity in their works.	1	2	3	4	5
IS 4	Encourages individuals to generate creative ideas.	1	2	3	4	5
IS 5	Encourages individuals to take creative initiatives.	1	2	3	4	5
IS 6	Atmosphere is constructive and positive for creativity.	1	2	3	4	5
6	**Conflict**					
In my university		**SD**	**D**	**N**	**A**	**SA**
CO1	Personal conflicts exist in the climate.	1	2	3	4	5
CO2	Contrasts of arguments among individuals on creative ideas are common.	1	2	3	4	5
CO3	People create hurdles in colleagues' creative ideas.	1	2	3	4	5
CO4	People do not accept others' opinions.	1	2	3	4	5
7	**Debates**					
In my university		**SD**	**D**	**N**	**A**	**SA**
DE1	Diversity of perspectives is encouraged.	1	2	3	4	5
DE2	Exchange of opinions on an idea is common.	1	2	3	4	5
DE3	Debate focuses on issues and ideas.	1	2	3	4	5
DE4	Positive critical comments on ideas are encouraged.	1	2	3	4	5
DE5	A variety of opinions and alternatives are shared on a creative idea.	1	2	3	4	5
DE6	Clashes among viewpoints due to different experiences are accepted.	1	2	3	4	5
8	**Playfulness/Humor**					
My university		**SD**	**D**	**N**	**A**	**SA**
PF 1	Encourages informal atmosphere.	1	2	3	4	5
PF 2	Provides comfortable atmosphere.	1	2	3	4	5
PF 3	Offers a relaxed atmosphere.	1	2	3	4	5

PF 4	Allows Individuals to share jokes and laughter.	1	2	3	4	5
PF 5	Provides a spontaneous atmosphere for creativity.	1	2	3	4	5
PF 6	Gives a playful atmosphere.	1	2	3	4	5
9	**Trust/Openness**					
In my university		**SD**	**D**	**N**	**A**	**SA**
TR1	Communication among colleagues is open and straightforward.	1	2	3	4	5
TR2	People share their ideas.	1	2	3	4	5
TR3	People trust their colleagues.	1	2	3	4	5
TR4	Any person can dare to put forward ideas.	1	2	3	4	5
TR5	People feel emotionally safe.	1	2	3	4	5
TR6	Conflicts are solved openly.	1	2	3	4	5
10	**Dynamism /Liveliness**					
In my university		**SD**	**D**	**N**	**A**	**SA**
DL1	Atmosphere is full of positive energy.	1	2	3	4	5
DL2	Atmosphere seems to be easy going.	1	2	3	4	5
DL3	Atmosphere drives individual's creativity towards organizational successes.	1	2	3	4	5

Appendix K

Post Hoc analysis of different Universities with reference to Creative Climate and dimensions. Creative Climate Post Hoc (Bonferroni) Test

(I) Sample group University	(J) Sample group University	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	2.149	1.00
	Capital University of Science &Technology, Islamabad	-21.95	.414
	Foundation University, Islamabad	-1.208	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	10.406	1.00
	International Islamic University, Islamabad	5.229	1.00
	National University of Modern Languages, Islamabad	5.198	1.00
	Quaid-i-Azam University, Islamabad	-10.592	1.00
	Riphah International University Islamabad	3.085	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-2.149	1.00
	Capital University of Science &Technology, Islamabad	-24.107	.059
	Foundation University, Islamabad	-3.358	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	8.256	1.00
	International Islamic University, Islamabad	3.079	1.00
	National University of Modern Languages, Islamabad	3.048	1.00
	Quaid-i-Azam University, Islamabad	-12.742	.270
	Riphah International University Islamabad	.9353	1.00
Capital University of Science &Technology , Islamabad	Bahria University ,Islamabad	21.958	.414
	COMSATS Institute of Information Technology, Islamabad	24.107	.059
	Foundation University, Islamabad	20.749	.479
	Federal Urdu University of Arts, Sciences &Technology Islamabad	32.364	.022
	International Islamic University, Islamabad	27.187	.011
	National University of Modern Languages, Islamabad	27.156	.045
	Quaid-i-Azam University, Islamabad	11.365	1.00
	Riphah International University Islamabad	25.043	.251
Foundation University, Islamabad	Bahria University ,Islamabad	1.208	1.00
	COMSATS Institute of Information Technology, Islamabad	3.358	1.00
	Capital University of Science &Technology, Islamabad	-20.749	.479
	Federal Urdu University of Arts, Sciences &Technology Islamabad	11.614	1.00
	International Islamic University, Islamabad	6.438	1.00
	National University of Modern Languages, Islamabad	6.407	1.00
	Quaid-i-Azam University, Islamabad	-9.383	1.00
	Riphah International University Islamabad	4.293	1.00

Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	-10.406	1.00
	COMSATS Institute of Information Technology, Islamabad	-8.256	1.00
	Capital University of Science &Technology, Islamabad	-32.364	.022
	Foundation University, Islamabad	-11.614	1.00
	International Islamic University, Islamabad	-5.176	1.00
	National University of Modern Languages, Islamabad	-5.207	1.00
	Quaid-i-Azam University, Islamabad	-20.998	.143
	Riphah International University Islamabad	-7.320	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	-5.229	1.00
	COMSATS Institute of Information Technology, Islamabad	-3.079	1.00
	Capital University of Science &Technology, Islamabad	-27.187	.011
	Foundation University, Islamabad	-6.438	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	5.176	1.00
	National University of Modern Languages, Islamabad	-.0312	1.00
	Quaid-i-Azam University, Islamabad	-15.822	.019
	Riphah International University Islamabad	-2.144	1.00
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-5.198	1.00
	COMSATS Institute of Information Technology, Islamabad	-3.048	1.00
	Capital University of Science &Technology, Islamabad	-27.156	.045
	Foundation University, Islamabad	-6.407	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	5.207	1.00
	International Islamic University, Islamabad	.0312	1.00
	Quaid-i-Azam University, Islamabad	-15.791	.266
	Riphah International University Islamabad	-2.113	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	10.592	1.00
	COMSATS Institute of Information Technology, Islamabad	12.742	.270
	Capital University of Science &Technology, Islamabad	-11.365	1.00
	Foundation University, Islamabad	9.383	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	20.998	.143
	International Islamic University, Islamabad	15.822	.019
	National University of Modern Languages, Islamabad	15.791	.266
	Riphah International University Islamabad	13.677	1.00
Riphah International University Islamabad	Bahria University ,Islamabad	-3.085	1.00
	COMSATS Institute of Information Technology, Islamabad	-.9353	1.00
	Capital University of Science &Technology, Islamabad	-25.043	.251
	Foundation University, Islamabad	-4.293	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	7.320	1.00
	International Islamic University, Islamabad	2.144	1.00
	National University of Modern Languages, Islamabad	2.113	1.00
	Quaid-i-Azam University, Islamabad	-13.677	1.00

$P < 0.05$

Idea Time(Creative Climate dimension) Post Hoc (Bonferroni) Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	.5047	1.00
	Capital University of Science &Technology, Islamabad	-1.632	1.00
	Foundation University, Islamabad	1.321	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.6697	1.00
	International Islamic University, Islamabad	1.507	1.00
	National University of Modern Languages, Islamabad	4.691	.258
	Quaid-i-Azam University, Islamabad	.0979	1.00
	Riphah International University Islamabad	-.3011	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-.5047	1.00
	Capital University of Science &Technology, Islamabad	-2.137	1.00
	Foundation University, Islamabad	.8167	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.164	1.00
	International Islamic University, Islamabad	1.003	1.00
	National University of Modern Languages, Islamabad	4.187	.116
	Quaid-i-Azam University, Islamabad	-.4068	1.00
	Riphah International University Islamabad	-.8059	1.00
Capital University of Science &Technology , Islamabad	Bahria University ,Islamabad	1.632	1.00
	COMSATS Institute of Information Technology, Islamabad	2.137	1.00
	Foundation University, Islamabad	2.954	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.302	1.00
	International Islamic University, Islamabad	3.140	1.00
	National University of Modern Languages, Islamabad	6.324	.075
	Quaid-i-Azam University, Islamabad	1.730	1.00
	Riphah International University Islamabad	1.331	1.00
Foundation University, Islamabad	Bahria University ,Islamabad	-1.321	1.00
	COMSATS Institute of Information Technology, Islamabad	-.8167	1.00
	Capital University of Science &Technology, Islamabad	-2.954	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.348	1.00

	International Islamic University, Islamabad	.1862	1.00
	National University of Modern Languages, Islamabad	3.370	1.00
	Quaid-i-Azam University, Islamabad	-1.223	1.00
	Riphah International University Islamabad	-1.622	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	-2.669	1.00
	COMSATS Institute of Information Technology, Islamabad	-2.164	1.00
	Capital University of Science &Technology, Islamabad	-4.302	1.00
	Foundation University, Islamabad	-1.348	1.00
	International Islamic University, Islamabad	-1.161	1.00
	National University of Modern Languages, Islamabad	2.022	1.00
	Quaid-i-Azam University, Islamabad	-2.571	1.00
	Riphah International University Islamabad	-2.970	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	-1.507	1.00
	COMSATS Institute of Information Technology, Islamabad	-1.003	1.00
	Capital University of Science &Technology, Islamabad	-3.140	1.00
	Foundation University, Islamabad	-.1862	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.161	1.00
	National University of Modern Languages, Islamabad	3.184	.738
	Quaid-i-Azam University, Islamabad	-1.409	1.00
	Riphah International University Islamabad	-1.808	1.00
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-4.691	.258
	COMSATS Institute of Information Technology, Islamabad	-4.187	.116
	Capital University of Science &Technology, Islamabad	-6.324	.075
	Foundation University, Islamabad	-3.370	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-2.022	1.00
	International Islamic University, Islamabad	-3.184	.738
	Quaid-i-Azam University, Islamabad	-4.594	.053
	Riphah International University Islamabad	-4.993	.330
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	-.0979	1.00
	COMSATS Institute of Information Technology, Islamabad	.4068	1.00
	Capital University of Science &Technology, Islamabad	-1.730	1.00
	Foundation University, Islamabad	1.223	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.571	1.00
	International Islamic University, Islamabad	1.409	1.00
	National University of Modern Languages, Islamabad	4.594	.053
	Riphah International University Islamabad	-.3990	1.00

Riphah International University Islamabad	Bahria University ,Islamabad	.3011	1.00
	COMSATS Institute of Information Technology, Islamabad	.8059	1.00
	Capital University of Science &Technology, Islamabad	-1.331	1.00
	Foundation University, Islamabad	1.629	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.970	1.00
	International Islamic University, Islamabad	1.808	1.00
	National University of Modern Languages, Islamabad	4.993	.330
	Quaid-i-Azam University, Islamabad	0.399	1.00

P< 0.05

Challenge (Creative Climate dimension) Post Hoc (Bonferroni) Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	0.431	1.00
	Capital University of Science &Technology, Islamabad	-1.416	1.00
	Foundation University, Islamabad	1.267	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.712	1.00
	International Islamic University, Islamabad	1.959	1.00
	National University of Modern Languages, Islamabad	2.489	1.00
	Quaid-i-Azam University, Islamabad	0.680	1.00
	Riphah International University Islamabad	-2.142	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-.4314	1.00
	Capital University of Science &Technology, Islamabad	-1.847	1.00
	Foundation University, Islamabad	.8362	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.280	1.00
	International Islamic University, Islamabad	1.528	1.00
	National University of Modern Languages, Islamabad	2.058	1.00
	Quaid-i-Azam University, Islamabad	0.248	1.00
	Riphah International University Islamabad	-2.573	1.00
Capital University of Science &Technology , Islamabad	Bahria University ,Islamabad	1.416	1.00
	COMSATS Institute of Information Technology, Islamabad	1.847	1.00
	Foundation University, Islamabad	2.683	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.128	1.00
	International Islamic University, Islamabad	3.375	1.00
	National University of Modern Languages, Islamabad	3.905	.823
	Quaid-i-Azam University, Islamabad	2.096	1.00
	Riphah International University Islamabad	-.7259	1.00
Foundation University, Islamabad	Bahria University ,Islamabad	-1.267	1.00
	COMSATS Institute of Information Technology, Islamabad	-.836	1.00
	Capital University of Science &Technology, Islamabad	-2.683	1.00

	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.444	1.00
	International Islamic University, Islamabad	0.692	1.00
	National University of Modern Languages, Islamabad	1.222	1.00
	Quaid-i-Azam University, Islamabad	-.5876	1.00
	Riphah International University Islamabad	-3.409	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	-2.712	1.00
	COMSATS Institute of Information Technology, Islamabad	-2.280	1.00
	Capital University of Science &Technology, Islamabad	-4.128	1.00
	Foundation University, Islamabad	-1.444	1.00
	International Islamic University, Islamabad	-.7523	1.00
	National University of Modern Languages, Islamabad	-.222	1.00
	Quaid-i-Azam University, Islamabad	-2.032	1.00
	Riphah International University Islamabad	-4.854	.288
International Islamic University, Islamabad	Bahria University ,Islamabad	-1.959	1.00
	COMSATS Institute of Information Technology, Islamabad	-1.528	1.00
	Capital University of Science &Technology, Islamabad	-3.375	1.00
	Foundation University, Islamabad	-.6920	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.7523	1.00
	National University of Modern Languages, Islamabad	.5301	1.00
	Quaid-i-Azam University, Islamabad	-1.279	1.00
	Riphah International University Islamabad	-4.101	.133
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-2.489	1.00
	COMSATS Institute of Information Technology, Islamabad	-2.058	1.00
	Capital University of Science &Technology, Islamabad	-3.905	.823
	Foundation University, Islamabad	-1.222	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.2222	1.00
	International Islamic University, Islamabad	-.5301	1.00
	Quaid-i-Azam University, Islamabad	-1.809	1.00
	Riphah International University Islamabad	-4.631	.143
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	-.6800	1.00
	COMSATS Institute of Information Technology, Islamabad	-.2486	1.00
	Capital University of Science &Technology, Islamabad	-2.096	1.00
	Foundation University, Islamabad	.5876	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.032	1.00
	International Islamic University, Islamabad	1.279	1.00

	National University of Modern Languages, Islamabad	1.809	1.00
	Riphah International University Islamabad	-2.822	1.00
Riphah International University Islamabad	Bahria University ,Islamabad	2.142	1.00
	COMSATS Institute of Information Technology, Islamabad	2.573	1.00
	Capital University of Science &Technology, Islamabad	.7259	1.00
	Foundation University, Islamabad	3.407	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.854	.288
	International Islamic University, Islamabad	4.101	.133
	National University of Modern Languages, Islamabad	4.631	.143
	Quaid-i-Azam University, Islamabad	2.822	1.00

P< 0.05

Idea Support (Creative Climate dimension) Post Hoc (Bonferroni) Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	1.133	1.00
	Capital University of Science &Technology, Islamabad	-3.104	1.00
	Foundation University, Islamabad	.9292	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.484	1.00
	International Islamic University, Islamabad	1.203	1.00
	National University of Modern Languages, Islamabad	-1.478	1.00
	Quaid-i-Azam University, Islamabad	-1.181	1.00
	Riphah International University Islamabad	1.505	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-1.133	1.00
	Capital University of Science &Technology, Islamabad	-4.238	.272
	Foundation University, Islamabad	-.2046	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.3508	1.00
	International Islamic University, Islamabad	.0699	1.00
	National University of Modern Languages, Islamabad	-2.612	1.00
	Quaid-i-Azam University, Islamabad	-2.315	.690
	Riphah International University Islamabad	.37171	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	3.104	1.00
	COMSATS Institute of Information Technology, Islamabad	4.238	.272
	Foundation University, Islamabad	4.034	.736
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.589	.678
	International Islamic University, Islamabad	4.308	.207
	National University of Modern Languages, Islamabad	1.626	1.00

	Quaid-i-Azam University, Islamabad	1.923	1.00
	Riphah International University Islamabad	4.610	.600
Foundation University, Islamabad	Bahria University ,Islamabad	-.9292	1.00
	COMSATS Institute of Information Technology, Islamabad	.2046	1.00
	Capital University of Science &Technology, Islamabad	-4.034	.736
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.5555	1.00
	International Islamic University, Islamabad	.2746	1.00
	National University of Modern Languages, Islamabad	-2.407	1.00
	Quaid-i-Azam University, Islamabad	-2.111	1.00
	Riphah International University Islamabad	.5763	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	-1.484	1.00
	COMSATS Institute of Information Technology, Islamabad	-.3508	1.00
	Capital University of Science &Technology, Islamabad	-4.589	.678
	Foundation University, Islamabad	-.5555	1.00
	International Islamic University, Islamabad	-.2809	1.00
	National University of Modern Languages, Islamabad	-2.962	1.00
	Quaid-i-Azam University, Islamabad	-2.666	1.00
	Riphah International University Islamabad	.0208	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	-1.203	1.00
	COMSATS Institute of Information Technology, Islamabad	-.0699	1.00
	Capital University of Science &Technology, Islamabad	-4.309	.207
	Foundation University, Islamabad	-.2746	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.28095	1.00
	National University of Modern Languages, Islamabad	-2.682	.779
	Quaid-i-Azam University, Islamabad	-2.385	.416
	Riphah International University Islamabad	.3017	1.00
National University of	Bahria University ,Islamabad	1.478	1.00

Modern Languages, Islamabad	COMSATS Institute of Information Technology, Islamabad	2.612	1.00
	Capital University of Science &Technology, Islamabad	-1.626	1.00
	Foundation University, Islamabad	2.407	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.962	1.00
	International Islamic University, Islamabad	2.682	.779
	Quaid-i-Azam University, Islamabad	.2963	1.00
	Riphah International University Islamabad	2.983	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	1.181	1.00
	COMSATS Institute of Information Technology, Islamabad	2.315	.690
	Capital University of Science &Technology, Islamabad	-1.923	1.00
	Foundation University, Islamabad	2.111	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.666	1.00
	International Islamic University, Islamabad	2.385	.416
	National University of Modern Languages, Islamabad	-.2963	1.00
	Riphah International University Islamabad	2.687	1.00
Riphah International University Islamabad	Bahria University ,Islamabad	-1.505	1.00
	COMSATS Institute of Information Technology, Islamabad	-.3717	1.00
	Capital University of Science &Technology, Islamabad	-4.610	.600
	Foundation University, Islamabad	-.5763	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.0208	1.00
	International Islamic University, Islamabad	-.3017	1.00
	National University of Modern Languages, Islamabad	-2.983	1.00
	Quaid-i-Azam University, Islamabad	-2.687	1.00

$P < 0.05$

Conflict (Creative Climate dimension) Post Hoc Test

(I) Sample group University	(J)Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	-.6124	1.00
	Capital University of Science &Technology, Islamabad	-.3776	1.00
	Foundation University, Islamabad	.1750	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.012	1.00
	International Islamic University, Islamabad	.5740	1.00
	National University of Modern Languages, Islamabad	-1.973	1.00
	Quaid-i-Azam University, Islamabad	-2.050	.688
	Riphah International University Islamabad	-2.017	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	.6124	1.00
	Capital University of Science &Technology, Islamabad	.2348	1.00
	Foundation University, Islamabad	.7875	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.624	.312
	International Islamic University, Islamabad	1.186	1.00
	National University of Modern Languages, Islamabad	-1.360	1.00
	Quaid-i-Azam University, Islamabad	-1.438	1.00
	Riphah International University Islamabad	-1.404	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	.3776	1.00
	COMSATS Institute of Information Technology, Islamabad	-.2348	1.00
	Foundation University, Islamabad	.5527	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.389	1.00
	International Islamic University, Islamabad	.9516	1.00
	National University of Modern Languages, Islamabad	-1.595	1.00
	Quaid-i-Azam University, Islamabad	-1.673	1.00
	Riphah International University Islamabad	-1.639	1.00

Foundation University, Islamabad	Bahria University ,Islamabad	-.1750	1.00
	COMSATS Institute of Information Technology, Islamabad	-.7875	1.00
	Capital University of Science &Technology, Islamabad	-.5527	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.837	1.00
	International Islamic University, Islamabad	.3989	1.00
	National University of Modern Languages, Islamabad	-2.148	.784
	Quaid-i-Azam University, Islamabad	-2.225	.233
	Riphah International University Islamabad	-2.192	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	-2.012	1.00
	COMSATS Institute of Information Technology, Islamabad	-2.624	.312
	Capital University of Science &Technology, Islamabad	-2.389	1.00
	Foundation University, Islamabad	-1.837	1.00
	International Islamic University, Islamabad	-1.438	1.00
	National University of Modern Languages, Islamabad	-3.985	.013
	Quaid-i-Azam University, Islamabad	-4.062	.002
	Riphah International University Islamabad	-4.029	.042
International Islamic University, Islamabad	Bahria University ,Islamabad	-.5740	1.00
	COMSATS Institute of Information Technology, Islamabad	-1.186	1.00
	Capital University of Science &Technology, Islamabad	-.9516	1.00
	Foundation University, Islamabad	-.3989	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.438	1.00
	National University of Modern Languages, Islamabad	-2.547	.041
	Quaid-i-Azam University, Islamabad	-2.624	.001
	Riphah International University Islamabad	-2.591	.240
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	1.973	1.00
	COMSATS Institute of Information Technology, Islamabad	1.360	1.00

	Capital University of Science &Technology, Islamabad	1.595	1.00
	Foundation University, Islamabad	2.148	.784
	Federal Urdu University of Arts, Sciences &Technology Islamabad	3.985	.013
	International Islamic University, Islamabad	2.547	.041
	Quaid-i-Azam University, Islamabad	-.0776	1.00
	Riphah International University Islamabad	-.0439	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	2.050	.688
	COMSATS Institute of Information Technology, Islamabad	1.438	1.00
	Capital University of Science &Technology, Islamabad	1.673	1.00
	Foundation University, Islamabad	2.225	.233
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.062	.002
	International Islamic University, Islamabad	2.624	.001
	National University of Modern Languages, Islamabad	.0776	1.00
	Riphah International University Islamabad	.0336	1.00
Riphah International University Islamabad	Bahria University ,Islamabad	2.017	1.00
	COMSATS Institute of Information Technology, Islamabad	1.404	1.00
	Capital University of Science &Technology, Islamabad	1.639	1.00
	Foundation University, Islamabad	2.192	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	4.029	.042
	International Islamic University, Islamabad	2.591	.240
	National University of Modern Languages, Islamabad	.043	1.00
	Quaid-i-Azam University, Islamabad	-.0336	1.00

P< 0.05

Debate(Creative Climate dimension) Post Hoc Bonferroni Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	-.5366	1.00
	Capital University of Science &Technology, Islamabad	-4.045	.051
	Foundation University, Islamabad	-2.045	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.6454	1.00
	International Islamic University, Islamabad	-.5454	1.00
	National University of Modern Languages, Islamabad	.2508	1.00
	Quaid-i-Azam University, Islamabad	-3.256	.015
	Riphah International University Islamabad	-.7329	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	.5366	1.00
	Capital University of Science &Technology, Islamabad	-3.508	.058
	Foundation University, Islamabad	-1.508	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.1087	1.00
	International Islamic University, Islamabad	-.0087	1.00
	National University of Modern Languages, Islamabad	.7875	1.00
	Quaid-i-Azam University, Islamabad	-2.720	.003
	Riphah International University Islamabad	-.1962	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	4.045	.051
	COMSATS Institute of Information Technology, Islamabad	3.508	.058
	Foundation University, Islamabad	2.000	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	3.400	.465
	International Islamic University, Islamabad	3.500	.049
	National University of Modern Languages, Islamabad	4.296	.016
	Quaid-i-Azam University, Islamabad	.7884	1.00
	Riphah International University Islamabad	3.312	.502

Foundation University, Islamabad	Bahria University ,Islamabad	2.045	1.00
	COMSATS Institute of Information Technology, Islamabad	1.508	1.00
	Capital University of Science &Technology, Islamabad	-2.000	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.400	1.00
	International Islamic University, Islamabad	1.500	1.00
	National University of Modern Languages, Islamabad	2.296	.695
	Quaid-i-Azam University, Islamabad	-1.211	1.00
	Riphah International University Islamabad	1.312	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	.6454	1.00
	COMSATS Institute of Information Technology, Islamabad	.1087	1.00
	Capital University of Science &Technology, Islamabad	-3.400	.465
	Foundation University, Islamabad	-1.400	1.00
	International Islamic University, Islamabad	.1000	1.00
	National University of Modern Languages, Islamabad	.8963	1.00
	Quaid-i-Azam University, Islamabad	-2.611	.487
	Riphah International University Islamabad	-.0875	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	.5454	1.00
	COMSATS Institute of Information Technology, Islamabad	.0087	1.00
	Capital University of Science &Technology, Islamabad	-3.500	.049
	Foundation University, Islamabad	-1.500	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.1000	1.00
	National University of Modern Languages, Islamabad	.7963	1.00
	Quaid-i-Azam University, Islamabad	-2.711	.002
	Riphah International University Islamabad	-.1875	1.00
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-.2508	1.00
	COMSATS Institute of Information Technology, Islamabad	-.7875	1.00

	Capital University of Science &Technology, Islamabad	-4.296	.016
	Foundation University, Islamabad	-2.296	.695
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.8963	1.00
	International Islamic University, Islamabad	-.7963	1.00
	Quaid-i-Azam University, Islamabad	-3.507	.002
	Riphah International University Islamabad	-.9838	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	3.256	.015
	COMSATS Institute of Information Technology, Islamabad	2.720	.003
	Capital University of Science &Technology, Islamabad	-.7884	1.00
	Foundation University, Islamabad	1.211	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.611	.487
	International Islamic University, Islamabad	2.711	.002
	National University of Modern Languages, Islamabad	3.507	.002
	Riphah International University Islamabad	2.524	.519
Riphah International University Islamabad	Bahria University ,Islamabad	.73295	1.00
	COMSATS Institute of Information Technology, Islamabad	.1962	1.00
	Capital University of Science &Technology, Islamabad	-3.312	.502
	Foundation University, Islamabad	-1.312	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.0875	1.00
	International Islamic University, Islamabad	.1875	1.00
	National University of Modern Languages, Islamabad	.9838	1.00
	Quaid-i-Azam University, Islamabad	-2.524	.519

P< 0.05

Playfulness/Humor(Creative Climate dimension) Post Hoc Bonferroni Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	-.2216	1.00
	Capital University of Science &Technology, Islamabad	-2.895	.768
	Foundation University, Islamabad	-.5959	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.0181	1.00
	International Islamic University, Islamabad	-.0039	1.00
	National University of Modern Languages, Islamabad	.9225	1.00
	Quaid-i-Azam University, Islamabad	-2.222	.545
	Riphah International University Islamabad	1.556	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	.2216	1.00
	Capital University of Science &Technology, Islamabad	-2.6734	.561
	Foundation University, Islamabad	-.3742	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.2035	1.00
	International Islamic University, Islamabad	.2177	1.00
	National University of Modern Languages, Islamabad	1.144	1.00
	Quaid-i-Azam University, Islamabad	-2.000	.137
	Riphah International University Islamabad	1.778	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	2.895	.768
	COMSATS Institute of Information Technology, Islamabad	2.673	.561
	Foundation University, Islamabad	2.299	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.876	1.00
	International Islamic University, Islamabad	2.891	.282
	National University of Modern Languages, Islamabad	3.817	.062
	Quaid-i-Azam University, Islamabad	.6730	1.00
	Riphah International University Islamabad	4.451	.035

Foundation University, Islamabad	Bahria University ,Islamabad	.5959	1.00
	COMSATS Institute of Information Technology, Islamabad	.3742	1.00
	Capital University of Science &Technology, Islamabad	-2.299	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	0.577	1.00
	International Islamic University, Islamabad	.5920	1.00
	National University of Modern Languages, Islamabad	1.518	1.00
	Quaid-i-Azam University, Islamabad	-1.626	1.00
	Riphah International University Islamabad	2.152	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	.0181	1.00
	COMSATS Institute of Information Technology, Islamabad	-.2035	1.00
	Capital University of Science &Technology, Islamabad	-2.876	1.00
	Foundation University, Islamabad	-.5777	1.00
	International Islamic University, Islamabad	.0142	1.00
	National University of Modern Languages, Islamabad	.9407	1.00
	Quaid-i-Azam University, Islamabad	-2.203	1.00
	Riphah International University Islamabad	1.575	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	.0039	1.00
	COMSATS Institute of Information Technology, Islamabad	-.2177	1.00
	Capital University of Science &Technology, Islamabad	-2.891	.282
	Foundation University, Islamabad	-.5920	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.0142	1.00
	National University of Modern Languages, Islamabad	.9264	1.00
	Quaid-i-Azam University, Islamabad	-2.218	.029
	Riphah International University Islamabad	1.560	1.00
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-.9225	1.00
	COMSATS Institute of Information Technology, Islamabad	-1.144	1.00

	Capital University of Science &Technology, Islamabad	-3.817	.062
	Foundation University, Islamabad	-1.518	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.9407	1.00
	International Islamic University, Islamabad	-.9265	1.00
	Quaid-i-Azam University, Islamabad	-3.144	.009
	Riphah International University Islamabad	.6342	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	2.222	.545
	COMSATS Institute of Information Technology, Islamabad	2.000	.137
	Capital University of Science &Technology, Islamabad	-.6730	1.00
	Foundation University, Islamabad	1.626	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	2.203	1.00
	International Islamic University, Islamabad	2.218	.029
	National University of Modern Languages, Islamabad	3.144	.009
	Riphah International University Islamabad	3.778	.009
Riphah International University Islamabad	Bahria University ,Islamabad	-1.556	1.00
	COMSATS Institute of Information Technology, Islamabad	-1.778	1.00
	Capital University of Science &Technology, Islamabad	-4.451	.035
	Foundation University, Islamabad	-2.152	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.575	1.00
	International Islamic University, Islamabad	-1.560	1.00
	National University of Modern Languages, Islamabad	-.6342	1.00
	Quaid-i-Azam University, Islamabad	-3.778	.009

P< 0.05

Trust /Openness(Creative Climate dimension) Post Hoc Bonferroni Test

(I) Sample group University	(J)Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	.6475	1.00
	Capital University of Science &Technology, Islamabad	-1.776	1.00
	Foundation University, Islamabad	-.8787	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.078	1.00
	International Islamic University, Islamabad	.1831	1.00
	National University of Modern Languages, Islamabad	.6767	1.00
	Quaid-i-Azam University, Islamabad	-1.353	1.00
	Riphah International University Islamabad	1.579	1.00
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-.6475	1.00
	Capital University of Science &Technology, Islamabad	-2.423	1.00
	Foundation University, Islamabad	-1.526	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.726	1.00
	International Islamic University, Islamabad	-.4644	1.00
	National University of Modern Languages, Islamabad	.0292	1.00
	Quaid-i-Azam University, Islamabad	-2.000	.314
	Riphah International University Islamabad	.9320	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	1.776	1.00
	COMSATS Institute of Information Technology, Islamabad	2.423	1.00
	Foundation University, Islamabad	.8974	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	.6974	1.00
	International Islamic University, Islamabad	1.959	1.00
	National University of Modern Languages, Islamabad	2.452	1.00
	Quaid-i-Azam University, Islamabad	.4230	1.00
	Riphah International University Islamabad	3.355	.851

Foundation University, Islamabad	Bahria University ,Islamabad	.8787	1.00
	COMSATS Institute of Information Technology, Islamabad	1.526	1.00
	Capital University of Science &Technology, Islamabad	-.8974	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.2000	1.00
	International Islamic University, Islamabad	1.061	1.00
	National University of Modern Languages, Islamabad	1.555	1.00
	Quaid-i-Azam University, Islamabad	-.4743	1.00
	Riphah International University Islamabad	2.458	1.00
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	1.078	1.00
	COMSATS Institute of Information Technology, Islamabad	1.726	1.00
	Capital University of Science &Technology, Islamabad	-.697	1.00
	Foundation University, Islamabad	.200	1.00
	International Islamic University, Islamabad	1.261	1.00
	National University of Modern Languages, Islamabad	1.755	1.00
	Quaid-i-Azam University, Islamabad	-.2743	1.00
	Riphah International University Islamabad	2.658	1.00
International Islamic University, Islamabad	Bahria University ,Islamabad	-.1831	1.00
	COMSATS Institute of Information Technology, Islamabad	0.464	1.00
	Capital University of Science &Technology, Islamabad	-1.959	1.00
	Foundation University, Islamabad	-1.061	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.261	1.00
	National University of Modern Languages, Islamabad	.49365	1.00
	Quaid-i-Azam University, Islamabad	-1.536	1.00
	Riphah International University Islamabad	1.396	1.00
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-.67677	1.00
	COMSATS Institute of Information Technology, Islamabad	-.02924	1.00

	Capital University of Science &Technology, Islamabad	-2.452	1.00
	Foundation University, Islamabad	-1.555	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.755	1.00
	International Islamic University, Islamabad	-.4936	1.00
	Quaid-i-Azam University, Islamabad	-2.029	1.00
	Riphah International University Islamabad	.9027	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	1.353	1.00
	COMSATS Institute of Information Technology, Islamabad	2.000	.314
	Capital University of Science &Technology, Islamabad	-.4230	1.00
	Foundation University, Islamabad	0.474	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	0.274	1.00
	International Islamic University, Islamabad	1.536	1.00
	National University of Modern Languages, Islamabad	2.029	1.00
	Riphah International University Islamabad	2.932	.356
Riphah International University Islamabad	Bahria University ,Islamabad	-1.579	1.00
	COMSATS Institute of Information Technology, Islamabad	-.9320	1.00
	Capital University of Science &Technology, Islamabad	-3.355	.851
	Foundation University, Islamabad	-2.458	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-2.658	1.00
	International Islamic University, Islamabad	-1.396	1.00
	National University of Modern Languages, Islamabad	-.9027	1.00
	Quaid-i-Azam University, Islamabad	-2.932	.356

P< 0.05

Dynamism/liveliness (Creative Climate dimension) Post Hoc (Bonferroni) Test

(I) Sample group University	(J) Sample group Universities	Mean Difference (I-J)	Sig.
Bahria University ,Islamabad	COMSATS Institute of Information Technology, Islamabad	1.245	1.00
	Capital University of Science &Technology, Islamabad	-1.307	1.00
	Foundation University, Islamabad	0.037	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.1333	1.00
	International Islamic University, Islamabad	0.471	1.00
	National University of Modern Languages, Islamabad	0.851	1.00
	Quaid-i-Azam University, Islamabad	-.2307	1.00
	Riphah International University Islamabad	2.000	.455
COMSATS Institute of Information Technology, Islamabad	Bahria University ,Islamabad	-1.245	1.00
	Capital University of Science &Technology, Islamabad	-2.553	.025
	Foundation University, Islamabad	-1.208	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-1.378	1.00
	International Islamic University, Islamabad	-.774	1.00
	National University of Modern Languages, Islamabad	-.393	1.00
	Quaid-i-Azam University, Islamabad	-1.476	.060
	Riphah International University Islamabad	0.754	1.00
Capital University of Science &Technology, Islamabad	Bahria University ,Islamabad	1.307	1.00
	COMSATS Institute of Information Technology, Islamabad	2.553	.025
	Foundation University, Islamabad	1.344	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	1.174	1.00
	International Islamic University, Islamabad	1.779	.567
	National University of Modern Languages, Islamabad	2.159	.317
	Quaid-i-Azam University, Islamabad	1.076	1.00
	Riphah International University Islamabad	3.307	.011

Foundation University, Islamabad	Bahria University ,Islamabad	-.0370	1.00
	COMSATS Institute of Information Technology, Islamabad	1.208	1.00
	Capital University of Science &Technology, Islamabad	-1.3447	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-.1703	1.00
	International Islamic University, Islamabad	0.434	1.00
	National University of Modern Languages, Islamabad	0.814	1.00
	Quaid-i-Azam University, Islamabad	-.267	1.00
	Riphah International University Islamabad	1.962	.389
Federal Urdu University of Arts, Sciences &Technology Islamabad	Bahria University ,Islamabad	.1333	1.00
	COMSATS Institute of Information Technology, Islamabad	1.378	1.00
	Capital University of Science &Technology, Islamabad	-1.174	1.00
	Foundation University, Islamabad	0.170	1.00
	International Islamic University, Islamabad	0.604	1.00
	National University of Modern Languages, Islamabad	0.985	1.00
	Quaid-i-Azam University, Islamabad	-.0974	1.00
	Riphah International University Islamabad	2.133	.540
International Islamic University, Islamabad	Bahria University ,Islamabad	-0.471	1.00
	COMSATS Institute of Information Technology, Islamabad	0.774	1.00
	Capital University of Science &Technology, Islamabad	-1.779	.567
	Foundation University, Islamabad	-0.434	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-0.604	1.00
	National University of Modern Languages, Islamabad	0.380	1.00
	Quaid-i-Azam University, Islamabad	-0.702	1.00
	Riphah International University Islamabad	1.528	.852
National University of Modern Languages, Islamabad	Bahria University ,Islamabad	-0.851	1.00
	COMSATS Institute of Information Technology, Islamabad	0.393	1.00

	Capital University of Science &Technology, Islamabad	-2.159	.317
	Foundation University, Islamabad	-0.814	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-0.985	1.00
	International Islamic University, Islamabad	-0.380	1.00
	Quaid-i-Azam University, Islamabad	-1.082	1.00
	Riphah International University Islamabad	1.148	1.00
Quaid-i-Azam University, Islamabad	Bahria University ,Islamabad	0.230	1.00
	COMSATS Institute of Information Technology, Islamabad	1.476	.060
	Capital University of Science &Technology, Islamabad	-1.076	1.00
	Foundation University, Islamabad	0.267	1.00
	Federal Urdu University of Arts, Sciences &Technology Islamabad	0.097	1.00
	International Islamic University, Islamabad	0.702	1.00
	National University of Modern Languages, Islamabad	1.082	1.00
	Riphah International University Islamabad	2.230	.052
Riphah International University Islamabad	Bahria University ,Islamabad	-2.000	.455
	COMSATS Institute of Information Technology, Islamabad	-.754	1.00
	Capital University of Science &Technology, Islamabad	-3.307	.011
	Foundation University, Islamabad	-1.962	.389
	Federal Urdu University of Arts, Sciences &Technology Islamabad	-2.133	.540
	International Islamic University, Islamabad	-1.528	.852
	National University of Modern Languages, Islamabad	-1.148	1.00
	Quaid-i-Azam University, Islamabad	-2.230	.052

P< 0.05