THE RELATIONSHIP BETWEEN INFORMATION TECHNOLOGY AND ORGANIZATIONAL CULTURE IN THE UNIVERSITY LIBRARIES OF SINDH, PAKISTAN

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Abstract
This study aimed to investigate the relationship between use of ICT and organizational culture in University libraries of Sindh, Pakistan. The research is descriptive and correlation. Populations of study library professionals who are working in university librariesand the sample sizes to 330 stratified random sampling method was selected instruments consisted of the questionnaire researchers' organizational cultures based on the characteristics of the seven Robbins and questionnaire-based information, and communication technology skills are the seven ICDL. Reliability using Cronbach's alpha for organizational culture, 09 / 9 and 68 /9determined thevalidity of ICT. To analyze the questions and review questions in addition to descriptive statistics, t-test with two independent samples, chip-square test and Pearson correlation coefficient was used. The results show that between organizational culture and the use of ICT, there is. The characteristics of organizational culture (innovation and risk-taking, according to the people, according to the group, courage seeking) using information and communication

technology, there is a significant relationship between other features characteristic of organizational culture (including attention to detail, result-oriented and stability and maintaining the status quo) using information and communication technology, there is no significant relationship. The use of ICT among employees is the same for men and women.
Keywords: organizational culture, information technology, university libraries, library professionals, technology, organization**.**

Introduction

The new era of the information age is known, is the era of information and communication technology, today's human societies based on information and communication technology (ICT1) experience that is characteristic of its own. Such societies called the Information Society [1].Information society community that lives in economic, social and cultural aspects of society is dependent on information and communication technologies and communities in which people at work, home and even in recreational taken advantage of this technology [1, 2].Unlike the bygone era of information and technology available to fans and industry experts had confirmed its legitimacy and acknowledgment of their relevance in modern society technologists, social scientists and ordinary people as well as information related to information technology and have been part of their everyday life. It is an all-round production use. While in the past, the use of technology related to the acquisition did not have any particular class [3]. Another feature of the information society is product information, product information and new communication technologies available to help anyone who wants to be considered. In such societies, the traditional concept in areas such as economy, education, business, management and commerce is changed. With the transition from the industrial age and the information age, according to Alvin Toffler (age wise) Human increasing demand for training is different than in the past with what is most sense In this regard information and communications technology is increasingly expanding into every walk of life can favorably affect [4].

Literature Review

According to the organization's culture and society and the national and international community, it is not strange; But more obvious value and importance of several decades and many scholars to research conducted in this area; the study of culture in the early 1980s indicates that the culture of an organization as a character in a man. Surely it must be admitted that man creates culture, and culture is also human. Culture teaches people to learn and constant thoughts in the form of complex groups with separate and specific tasks are to be organized. The ideas were rather stable after being in mind. Change is difficult, since the fate of human behavior response that he could come to her and respond to the cultural elements, which can build on them (explain) his repressed or alter [5]. Organizational culture is closely linked to the general society; Sector covers a wide range of behavior and organizational development path and to bring about the desired behavior change and sustainability and help them effectively is measured. This was

followed in organizational culture that employees see how their organizations evaluate whether the organization is too structured? Does it reward innovation? Do repress conflicts? Organizational culture has a long track record, but it has been an issue recently, particularly in the field of knowledge management and organizational development and organizational behavior spread, and if it can be considered as one of the most important factors affecting the productivity of the organization[6]. Organizational culture perception that people have of the organization, organizational culture is something that exists in the organization, not the individual. Special traits organization dedicated to represent the typical specifications and prove that differentiate an organization from other organizations [7,8]. Information can make a decision to reduce the energy required for operation chaos and crisis to the creation of order in the system defined. The two-way communication links between all institutions, objective and subjective, and structural parts of society. The relationship between people and institutions together with the institutions jointly can be referred from a variety of community connections. From the point of view of macroeconomic and general management, ICT can be said that the process of data collection and production of information for ordinary people as well as provide facilities manager job decisions Thus, ICT is not limited to the keys and crates but also a challenge for managers is clairvoyant [9].

Background research
In another study entitled, "explain the pattern of organizational culture based on Islamic values in the workplace and their role in job satisfaction in 1995."The results of the analysis indicate that the administrative organization of the undesirable and the status quo in terms of patterns of organizational culture based on Muslim ideology, there is a significant difference; As well as the creation and development of organizational culture has a positive impact on job satisfaction [10]. ICT program is based on the perceptions of utilitarian and emotional needs the first part of this section deals with how to talk about it a great technology could have the effect of certain myths. The second part of this issue is how a demand for spiritual values can be advantageously used in a broader culture, and the third part shows how to run a school system tissue, Author finishing with a short leave opened the way for further research, but it's also opened for changes [11].
University of America in a paper titled "technology, training and development of extensive research in conjunction with international information communication technology (ICT) development programs' extensive research areas related to human growth, development Information technology and teaching methods tell [12]. This study uses quantitative methods to show the impact of communication technologies with humane development. The text of this research was collected from findings of various agencies. The theoretical framework consists of two parts: the first and second combining communication technology training programs. With a little research into the existence of these cases, as described, are mixed together can see that these two issues as a solution is the useful and important and useful tool. This attention to the issue of recognition of ICT training programs is needed to reveal to us. This research not only for

programmers and managers of international programs, ICT work is useful but for those who in any way deal with these problems is also helpful [13].

Development of hypotheses and model:
Stanley Davis organizational culture model of shared values and beliefs give meaning to the members of the institution and provide instructions for their behavior in organizations [14]. Organizational culture is a system of shared understanding that members of the organization and this feature make the separation between the two organizations [15]. The organizational culture scores obtained in this study through questionnaires of organizational culture in the form of seven main characteristics (innovation and risk taking, attention to detail, result-oriented, according to the people, according to the group, the spirit of courage and amortized, Seeking courage and stability) was also set up collection.

The term information technology development first priority and Weiser in 1985, in order to support decision making and the role of computer and information processing were used there are different understandings of information technology and these perceptions have led to distinctive images presented in different assemblies [15]. Computer-based information and communication technology tools for people to work with and support of information and processing the information needed to use it. In an organization, theoretical concepts, behavior and culture connect and interact with one another first and resolve any aspect of the organization, and secondly; all three of the above five factors can be environmental, technological, organizational structure, human resources and appointed joint managing them in a comparative study of the organizational model used together. In other words, organizational theory and behavior receives culture, the combination of the count [16]. Strong organizational culture that can influence the nature of the behavior and performance of the organization, An important role in internal control employee behavior and organizational behavior is an important factor in shaping and the important role in the creation of undesirable changes in behavior and stability of the organization's behavior. Organizational culture is a set of beliefs and values that influence the behavior and ideas of members of the organization and can be considered as a source to achieve organizational goals [16].

Research Questions
1. Does the use of ICT and organizational culture in Universitylibraries there?
2. Are the seven characteristics of Information and Communication Technology and organizational culture in University libraries there?
3. Does the use of ICT in university libraries between men and women working in offices is different?

Research hypotheses

1. Is there Relationship between the application of ICT and organizational culture in the personnel university libraries?
2. Is there relationship among the seven characteristics of information and communication technology and organizational culture university libraries?
3. The application of information and communication technology in libraries between men and women working in university libraries is different.

Materials and Methods

The research is descriptive and correlation. A population of the study was library professionals who are working in the seminar library, central library of universities of Sindh province and 330 samples were selected through stratified random sampling; the instruments included questionnaire organizational cultures based on the characteristics of the seven Robbins and questionnaire-based information, and communication technology skills are the seven ICDL. Reliability using Cronbach's alpha for organizational culture, 0/90 and 0/86 determined the validity of ICT. To analyze the questionnaire and survey questions, in addition to descriptive statistics, t-test with two independent samples, chip-square test and Pearson correlation coefficient was used.

Data Analysis and Discussion

Hypothesis: Is there Relationship between the application of ICT and organizational culture in the personnel university libraries?

Pearson correlation analysis (r = 0/450) the relationship between organizational culture and use of ICT suggests that statistically significant confidence level of less than 0/95 percent and 0/05 percent statistically significant relationship, There are between organizational culture and use of ICT As such, it can be said that both the organizational culture, and the use of ICT communicate with each other and in the event of a change (increase or decrease) in one of these two variables, control change (increase or decrease) will be other variables. This means that when the organizational culture is favorable and appropriate, the use of ICT among employees is higher. The results of the relationship between organizational culture and the use of ICT, together with the corresponding graph are shown below:

Table 1: Results of the correlation between organizational culture and the use of ICT

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
Organizational Culture and ICT	0/05	329	0/450	R	Pearson	Distance

Hypotheses: Is there relationship among the seven characteristics of information and communication technology and organizational culture university libraries?

One of the main goals of this study was to examine the relationship between organizational culture and the use of ICT indicators, seven, respectively. The results covered in this section will be devoted to testing the relationship. The type of test used must be said that the correlation test used in this study, because of the distance both the independent variable (with the index constituent) and related parametric test of Pearson. Seven indicators are as follows:

1. The results of the correlation between innovation and use of ICT:

Correlation test (r = 0/546) indicates the confidence level of less than 0/99 and 0/01 between innovation and use of ICT has a direct and positive relationship is relatively strong. This means that employees are more innovative compared to employees with less innovation, more familiar than the use of ICT and have switched more of them. The following table along with a chart that follows shows the same result:

Table 2: results of the correlation between innovation and use of ICT

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
Innovation and use of ICT	0/01	328	0/546	R	Pearson	Distance

2. The results of the correlation between attention to detail and use of ICT

After discussing the above questions, test the relationship between attention to detail and use of ICT was carried out according to which, no statistically significant relationship between attention to detail and use of ICT in any of the error, There are no less than 90 /9and 05/0. (r = - 0/080). In other words, these two variables have no relationship with each other and a change in one, not cause a change in another. The following table along with the corresponding scatter diagram shows the result of lots:

Table 3: The results of the correlation between attention to detail and use of ICT

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
Attention to detail and use of ICT	0/675	328	-0/080	R	Pearson	Distance

3: The results of the correlation between results-oriented and application of Information and Communication Technology:

In relation to the results-oriented relationship between the use of Information and Communication Technology, the results suggest that, based on the Pearson correlation coefficient (r = - 0/001), no statistically significant relationship between the results-oriented and

application of information technology and there is no communication. This means that two variables, results-oriented and application of Information and Communication Technology and mobile communication have together with a change in one, another change will not be achieved; On the other hand, a negative correlation, indicating that the two variables and result-oriented use of Information and Communication Technology had a negative correlation with each other and an increase in pain, one with the other and vice versa will be reduced to one by the increase in the other. The following table and the graph, indicating that this issue is:

Table 4: Results of correlation between results-oriented and application of Information and Communication Technology

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
results-oriented and application of ICT	0/998	328	-0/001	R	Pearson	Distance

4. The results of the correlation between attention to and use of Information and Communication Technology:

Regarding the relationship between individuals and the use of Information and Communication Technology shows that the confidence level of less than 0/95 and 0/05 statistically significant And about the average between the individuals and the use of Information and Communication Technology is given ($r = - 0/466$). So that any increase in one of these two factors, the decline in the other and vice versa will be reduced to one by the increase in the other. The results in the table below, along with the corresponding graph show the result:

Table 5: According to the results of the correlation between the use of Information and Communication Technology

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
According to the people and the use of ICT	0/05	328	-0/466	R	Pearson	Distance

5. The results of the correlation between attention to and use of Information and Communication Technology:

Regarding the relationship between the group and the application of Information and Communication Technology that reliably 0/95 and Level of less than 0/05, and a relatively weak

correlation between the two variables are due to the use of Information and Communication Technology (r = 0/381). Therefore, it should be stated that the two variables and the use of Information and Communication Technology according to communicate with each other and in case of any change (increase or decrease) in one of these two variables, control change (increase or decrease) will be in the other. This means that when the matter is in the organization, the use of Information and Communication Technology by staff is more. The following table and the graph, the conclusion of the exhibit:

Table 6: The results of the correlation between attention to and use of Information and Communication Technology

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
According to the group use of ICT	0/05	328	0/381	R	Pearson	Distance

6. The results of the correlation between ambition and boldness use of Information and Communication Technology:

Pearson correlation analysis (r = 0/364) showed that the confidence levels of less than 0/95 and 0/05 statistically significant and relatively moderate course between ambition and courage are using Information and Communication Technology. Therefore, it should be stated that the two variables of courage, power and communicate with each other using Information and Communication Technology and changes (increase or decrease) in one of these two variables, with changes (increase or decrease) will be in the other variables. The table that follows, along with the corresponding charts, the results indicates that:

Table (8): The results of the correlation between ambition and boldness use of Information and Communication Technology

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
Courage seeking and using ICT	0/05	328	0/364	R	Pearson	Distance

7. The results of the correlation between the stability and the use of Information and Communication Technology:

Examine the relationship between fixed and use of Information and Communication Technology suggests that it is no statistically significant relationship between stable and there is no use of Information and Communication Technology and these two variables are related to each other (r = 0/037). This means that if one of these two variables changes (increase or decrease) to be

achieved, a change (increase or decrease) in other variables cannot be achieved. The following table along with the distribution graph, the results show passes:

Table 8: The results of the correlation between the stability and the use of information and communication technology

Variable	The level of significance	Degree of freedom	Value Relation	The test statistic	Correlation	Scale variables
Stability and use of ICT	0/844	328	0/037	R	Pearson	Distance

- The results of the correlation between organizational culture characteristics and use of information and communication technologyAccording to Pearson's correlation, coefficient measures the relationship between organizational culture and use of information and communication technology suggests that statistically significant confidence level of less than 0/95, and 0/05 percent of the four indicators of organizational culture indicators (New innovation and risk-taking, according to the people, according to the group and boldness seeking) using information and communication technology, there was a significant relationship. According to the results of the study confirmed the first question about the relationship between organizational culture and the use of information and communication technology and the rejection of the second question that there is no relationship between organizational culture and its use of information and communication technology.

It can be said that each of the above changes and communicate the change (increase or decrease) in one of the two variables change (increase or decrease) will be another variable.In addition, based on the results of the remaining index indicated that the statistical confidence level of less than 0/95 percent and 0/05 percent of any remaining significant relationship between indicators of organizational culture (meticulous attention to details, results-oriented, stability) using information and communication technology does not exist. Therefore, it can be said that these changes do not communicate with each other means that if one of two changes (increase or decrease) will result in other changes (increase or decrease) will not be achieved."The application of information and communication technology in libraries of university between men and women working in offices is different."According to the results, no significant difference between male and female employees in terms of the use of information and communication technology and the use of this technology does not exist between the two groups of employees are identical. Therefore, it should be stated that the first question of research based on the difference between male and female employees in terms of the use of information and communication technology is rejected and The third question of the application of this technology is that the lack of difference between male and female employees is accepted.

Table 9: The results question the use of information and communication technology difference between male and female employees

The level of	Degree	Value	Average	Deviation	Average	Number	Groups	Indicators

significance (P)	the freedom		difference	Criteria				
0/353	328	0/944	8/40	23/38	58/40	20	Male employees	Using Information and Communication Technology
				22/11	66/80	10	Female employees	

6. Conclusion

Pearson correlation test results regarding the relationship between organizational culture and use of information and communication technology suggest that statistically significant confidence level of less than 0/95 percent and 0/05 percent a significant relationship between organizational culture is the use of information and communication technology. According to the results of the study confirmed the first hypotheses about the relationship between organizational culture and the use of information and communication technology and in front of the second question that there is no relationship between organizational culture and the use of information and communication technology.Therefore, we can say that between culture and the use of information and communication technology relation to each other and in the event of a change (increase or decrease) in one of two variations, change (increase or decrease) will be in the other variables.

Are the seven characteristics of organizational cultures and the use of information and communication technology in university libraries there? According to Pearson, correlation tests the relationship between organizational culture and the use of information and communication technology seven properties were revealed Which statistically reliably 0/95 and 0/05 percent lower than the level of trade between the four indicators of organizational culture.(Innovation and risk-taking, according to the people, according to the group and boldness seeking) using information and communication technology, there was a significant relationship.

According to the results of the study hypothesis that the relationship between organizational culture and the use of information and communication technology and to reject the second hypothesis that there is no relationship between organizational culture and its use of information and communication technology.

In addition, based on the results of the remaining indicated that statistically0/95 percent and 0/05 percent confidence level with less error remain no significant relationship between organizational culture indices (punctuality, result-oriented, stable) using information and communication technology does not exist. Therefore, we can say that these variables do not communicate with each other means that if one of two changes (increase or decrease) to be achieved in other variables (increase or decrease) will not be achieved.

It can be said that each of the variables associated with each other, and change (increase or decrease) in one of the two variables changes (increase or decrease) will be other changes."The

use of information and communication technology in libraries of university between men and women working in offices in Sindh province is different."A hypothesis that this phenomenon by two independent sample t-test was conducted to examine this question. The use of this test is to measure the distance from one side of the index using information and communication technology and on the other hand, because of the two groups (female and male employees) is.According to the results, no difference between male and female staff there in terms of the use of information and communication technology and the applications of information and communication technology among both groups of employees are identical. It can be stated that the first hypothesis that there is a difference between male and female employees in terms of the use of information and communication technology has been rejected and in contrast; the second hypothesis regarding the lack of differences in the application of information and communication technology among male and female staff accepted.

Recommendation

- The creation and establishment of the reward or punishment based on the use of information and communication technology by employees based on a predetermined functional goal of strengthening the organization's culture and increases the use of information and communication technology among employees.
- Short-term and long-term training courses for training specialists and skilled information and communication technology in the field of information and communication technology in order to get away from the physical environment to carry out their duties and do things faster and with more accuracy than before.
- University Administration for improving the situation of the use of Information and Communication Technology in libraries to prepare the articles of association, the overall and the general public of the manner and extent of the use of Information and Communication Technology. To all employees based on the type and how they are a clear framework for the use of Information and Communication Technology.
- One way to identify barriers to the use of Information and Communication Technology in University libraries is carrying out tests that the results are exclusively for information in the field of dating and identifying the strengths and weaknesses of employees and Provide appropriate solutions in order to achieve the desired level.

References

1. Amadzor, W. E. (2016). *The perception of ICT on the teaching and learning of kinematics graphs_a case study* (Doctoral dissertation, University of Education, Winneba).
2. Cambridge, J. (2012). Investigating national and organizational cultures in the context of the international school. *International Education, Principles and Practice*, 197-211.

3. Cooke, R. A., &Szumal, J. L. (1993). Measuring normative beliefs and shared behavioral expectations in organizations: The reliability and validity of the Organizational Culture Inventory. *Psychological reports*, *72*(3_suppl), 1299-1330.

4. Coroama, V., Bohn, J., &Mattern, F. (2004, October). Living in a smart environment-implications for the coming ubiquitous information society. In *2004 IEEE International Conference on Systems, Man and Cybernetics (IEEE Cat. No. 04CH37583)* (Vol. 6, pp. 5633-5638). IEEE.

5. Kowalczyk, S. J., &Pawlish, M. J. (2002). Corporate branding through external perception of organizational culture. *Corporate Reputation Review*, *5*(2-3), 159-174.

6. Jung, I. (2005). ICT-pedagogy integration in teacher training: Application cases worldwide. *Journal of Educational Technology & Society*, *8*(2), 94-101.

7. Langheinrich, M., Coroama, V., Bohn, J., &Mattern, F. (2005). Living in a smart environment–Implications for the coming ubiquitous information society. *Telecommunications Review*, *15*(1), 132-143.

8. Muela-Meza, Z. M. (2004). Information needed to cope with crisis in the lives of individuals and communities: an assessment of the roles public libraries and voluntary sector agencies play in the provision of such information.

9. Thomas, C. B. (2002). *Information communications technologies in education: A Faustian bargain?* (pp. 1-96). McGill University.

10. Salazar, J. F. (2008). Indigenous peoples and the cultural constructions of information and communication technology (ICT) in Latin America. In *Information Communication Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 1966-1975). IGI Global.

11. Trottier, T., Van Wart, M., & Wang, X. (2008). Examining the nature and significance of leadership in government organizations. *Public administration review*, *68*(2), 319-333.

12. Yavuz, M. (2010). The effects of teachers' perception of organizational justice and culture on organizational commitment. *African Journal of Business Management*, *4*(5), 695.

13. Zhang, P. (2008). Technical opinion Motivational affordances: reasons for ICT design and use. *Communications of the ACM*, *51*(11), 145-147.

14. Zuber, J. K. *M. A,(2003). Technology training, and development: An exploratory study of International Information and communication technology (ICT) development programs* (Doctoral dissertation, Dissertation abstract MA American University).

15. ZareyiMatin, H. (1995). Explain the pattern of organizational culture based on Islamic values in the work environment and its role on job satisfaction [Thesis in Persian]. *Tehran: TarbiatModares University*.