# CULTURAL ENGINEERING COMPONENTS AND THEIR RELATIONSHIP WITH ICT IN HIGHER EDUCATION

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**ABSTRACT**
Technology is a basic factor in production and economic and cultural development and technology development is a strategic purpose. These dimensions influence each other and need attempt and creating this fitness is an important aspect of government and organizations' responsibilities. Therefore, evolution of social and cultural beliefs for developing technology can create a paradox in relation with preserving scientific, belief and cultural values in society. Therefore, this study aims to identify components of cultural engineering in relation with information technology and communication in employees of Health Deputy in Mazandaran in 2013. Research method was descriptive-correlational and data gathering tool was researcher-constructed questionnaire cultural engineering and information technology and communication. Statistical sample include 117 male and female employees of Health Deputy in 2013 with simple random sampling. Questionnaire's validity was confirmed using content and face validity and their reliability with Cronbach alpha .86 and .84. Data was gathered by researcher reference to offices and data analysis was done using SPSS software in two levels descriptive statistics (mean percent and standard deviation) and inferential statistics (Pearson correlation coefficient and univariate t-test).Cultural engineering and its related items' mean was below average in both males and females. Mean of all technology aspects was higher than average in males and females. There was positive and significant relationship between cultural engineering and information technology and communication in men (r=0.525, sig<0.001) and in women (r=0.515, sig<0.001). In sum, findings showed that there is a significant and positive relationship between cultural engineering and information and communication technology.

**KEY WORDS**: Cultural engineering, Health Deputy Employees, Information and communication technology.

**INTRODUCTION**
In modern fast world, significant developments in information technology and increasing growth of tourism, which imposes extensive transformations to societies in globalization path and encompasses human life, have faded meaning of geographical and political boundaries and a new concept called cultural boundaries has emerged which pay attention to interaction and encountering cultures (Ibrahimian, 2012). Information technology is an important factor of this change and accelerates this new phenomenon.

Development and technology were grown with each other in west. For this reason, they have not problems of third world countries. Technology evolves very rapidly but social institutions change slowly and its consequence is creating distance between society systems. In the case of accepting technology, we should accept transformation in all aspects of society including social, cultural, economic and cultural aspects. Therefore, in order to survive in modern complex world, essential changes are needed in organizations. Information technology can help achieving this goal via creating new structures and organizational duties (Matthew and Gillis, 2003). Among this, one of important aspects which are more influenced by information and communication technology is culture of society. In order to design culture of society and determining direction of movement and development and providing required beds for its flourishing, it is necessary to create a system based on most correct and safe structures. This system should be immune from damage; there should be no disruption in its evolution and it has resistance capability against invasions. For this reason, culture engineering is presented which is designing culture system with maximum confidence and efficiency and success. Generally, from global cultural organizations view, cultural engineering is part of activities related to socio-economic development and cultural investment management. On the other hand, these organizations consider cultural engineering as encompassing manner, design, establishment and development of management tools and certain systems for cultural development or cultural programs (Robins and Webster, 2006). When we look with scientific perception to concept of culture and its effect on economy and politics, we find that beliefs and values which are basic factors for creating Islamic powerful system and also Islamic Revolution in world, are targeted with predetermined actions of colonial

organizations that Supreme Leader has called it cultural invasion and by influence of partial sciences produced in West, especially in human sciences become weak and destroy by capitalistic systems in the world. Therefore, it is necessary to design and implement suitable activities to encounter these destructive factors (Bonyanian, 2007). Today, in every organization, using information technology is discussed and its usefulness and necessity is clear. Using information technology is developed along with diverse information systems which are designed for different needs. This technology gives the ability to organizations to communicate better with more organizations and environment. Because of increasing complexity in works and activities, organizations administrators paid more attention to information technology. In sum, reasons of investment in information technology by organizations are presented in figure (1).
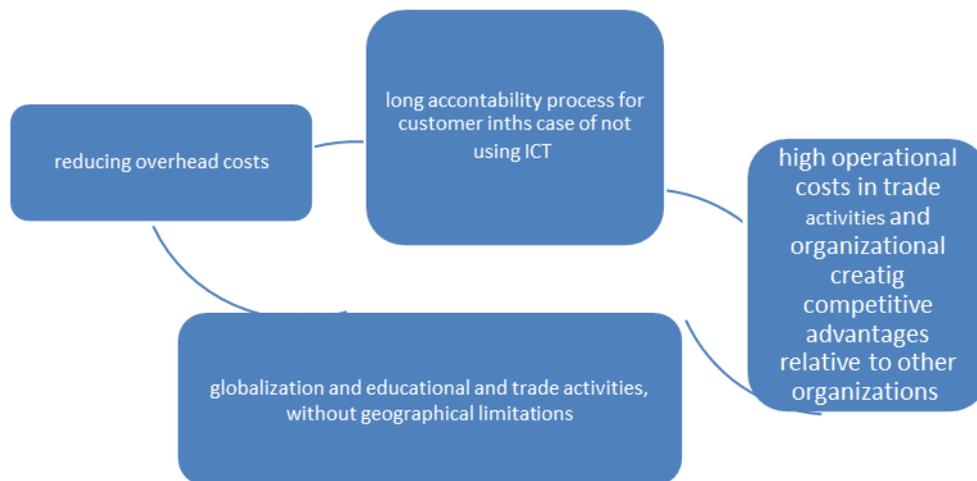


**Figure 1. Reasons for investment in IT in organizations**

Organizations use information technology in their strategies as follows: redesigning work flow, work network and electronic data exchange system. Diagram (1) shows a summary of information technology evolution in organization. Modern information technology which is based on advanced technology provides this facility for managers to reduce complexities of systems and decentralize themselves. As a result, high bureaucratic structures change to flexible and simple structures.
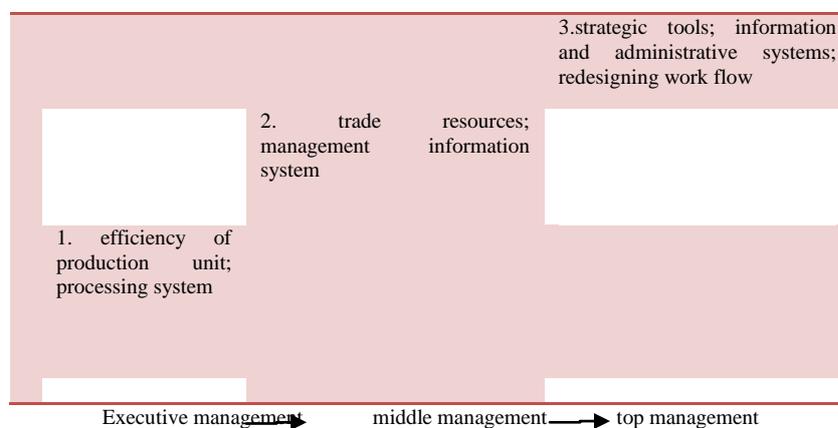


**Diagram 1. Evolutionary trend of information technology in organization**

By entering technology in organization, this organization can conduct its operation with few middle managers. In fact, without information system, organizations' structure is like a pyramid which all decision makings happen in top. By entering this technology into organization, access to information is easier and need to subordinate employees decreases.

In this case, organization structure which is as reverse T convert to lozenge over time and by extending information system and information gather and release in every direction (Karahanna *et al*, 2005). Diagram (2) shows effect of information technology on organization structure.
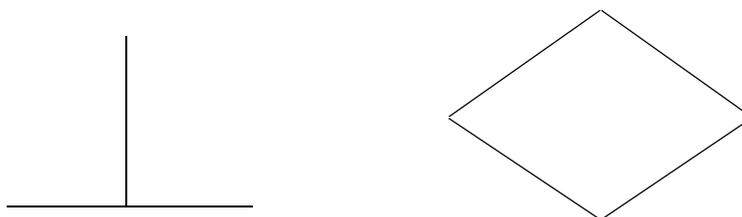


**Diagram 2. Effect of information technology on organization structure**

In 2002, "cultural engineering" was determined by Supreme Leader of Iran in annual meeting of Cultural Revolution High Council members in order to enhance main elements of Islamic and national culture against western destructive culture. Mokhber Dezfuli (2007) says cultural engineering can solve many cultural and social problems if it originates from Islamic and national principles and basics. Cultural engineering forms software part of culture. University is an important center for exchanging opinion and dialogue for cultural development and can increase perception and awareness of students by raising cultural engineering topic and introduce required solution for extending it. Regarding emphasis of Supreme Leader for culture and important role that university and students can play in providing software and hardware in culture (Ibrahimian, 2013). Among this, higher education as a basic context in educational and research parts has role in educating expert and efficient human resources that increases general knowledge level and experts' skill in all levels (Afkhami Aqda, 2013). Today, information technology is considered as a development axis in universities and scientific and research centers. From last decade of twentieth century, a significant increase has occurred in using ICT in higher education such that ICT can facilitate learning and teaching process (Stensaker *et.al*, 2007). Role of ICT in universities is very influential in educational, cultural, economic and social issues and its consequences are different in universities (Hassanzade, 2006). New communication technologies in education have changed nature of learning-teaching process. These technologies not only diversified teaching methods in universities, but also extend its borders outside university and created new learning environments (Reshadatjou, 2005). Undoubtedly, information and communication is one important social system and universities, because of their leading role in producing and publishing knowledge and information, are domains which are strongly influenced by ICT. One of important consequences of this is fundamental changes in thinking method about role of university, student, faculty, learning and teaching. Cultural consequences of technologies have certain importance. About culture, it can be said that culture is like a system which has types and parts. Cultural engineering should be considered as system engineering. Culture has different types and in culture engineering, all cultures should be engineered. The idea of culture engineering is presenting geometry and form and plan of a macro cultural movement to create a clear perspective from fields of movements and capacity of infrastructures and cultural structures (Sharbatian, 2012).

Culture has comprised of three layers from system view: fundamental layer (basic assumptions, beliefs and ideology), middle layer (values), and external layer (calligraphy, language, customs, symbols and behaviors). There are elements in every layer which interact with each other (Leader remarks, 2005). Therefore, culture engineering is designing, renewing and restructuring culture system and engineering theorizing as a science (Dunleavy, 1991). Regarding importance of planning and cultural policy making in national higher education, universities should be considered as intellectual cores and thinking mind of cultural engineering. Evolutions in higher education in recent two decades depends on increase in demand for higher education, developing communication technologies, necessity of developing human resources, rapid technology changes, knowledge accumulation and social revolutions that lead to serious challenges and changes in role of university and higher education in new millennium. Significant changes in higher education and moving toward masses and interpretations caused by public need to higher education has created a new view in developing higher education that under the influence of information revolution and information technology paradigm, has added a new aspect to higher education that cultural development of higher education system is one of its necessities (Schulte, 2004).

Major part of culture is beliefs and ethics of an individual or society. Society behaviors which belongs to public culture and culture of a nation, arises from that beliefs. Culture category includes behaviors in many cases but root of culture is idea, conception and imagination of each human from realities and facts of world and individual and social moods and national states (Leader Remarks, 2005). One of new discussions in recent decade in industrial countries is cultural engineering. Relying on remarks of Leader, cultural engineering has three important duties: evaluating existing condition, determining ideal culture (or desired cultural condition) and presenting plan and solution (how to reach desired condition). He says: one of our main duties, in the first place, is cultural engineering of country; i.e. to determine how should be the national culture, public culture, internal great movement and quality of what is called culture and inside of humans and society; what is its defects and problems and how they should be resolved; where is conflicts? Engineering is always accompanied with system concept and system has elements like input, processing (decision making), output or feedback. Inputs of one system is demands and supports of society members that in processing part, policies are taken for them and these policies are implemented as a system output in society level. If these policies and decisions were not correspondent with demands, they will re-feedback in other process and enter in system as demand.

Imam Khomeini, as an architect of Islamic revolution or revolution cultural architect, has introduced a framework about cultural engineering which is "Islamic Republic"; not a word more or less. This framework was presented when some policy makers introduces other types of engineering for country because of governing other approaches in world. Islamic Republic is a kind of cultural engineering which has cultural load, culture and Islamic values and tries to meet ideal culture. In cultural engineering, the purpose is presenting a comprehensive plan with a cultural look to all domains and activities in different social, political and economic activities. As Leader remarks every plan should have a cultural attachment. This wise look of Leader needs that in designing, building, preparing and producing every plan and activity; first its particular position should be determined in relation with topic such that its output reflects culture. Every culture has a common model for thinking. This model is like an adhesive which stabilizes whole culture and gives it integration and solidarity. Thinking in every culture is a conception of reality and originates from ideology of that culture. Change in ideology not only changes cultural meaning but also it encompasses something that historians call it change of age. Inside every culture, there are scarce individuals who can describe ideology of a culture and thinking method because majority of people melt in process of thinking. Emerging new ideology is dependent on growing awareness of systems nature and using this awareness is effective in organizing and management. In order to understand emerging thinking, it is necessary to understand systems that shape in cultural engineering framework. Culture and cultural changes is a continuous process which paves its way regarding revolutions pace and application of information technology and globalization.

Therefore, in an ideological system, universities and research centers cannot be indifferent in directing technology and its effects on culture of universities. This is possible with planning. Cultural engineering of a university means that we identify its constituent elements and define horizontal, vertical, traverse, formal and informal relations between them. Purpose of cultural engineering is creating suitable social-cultural bed and stimulating development and material and spiritual sublime I ideological system and society beliefs; i.e. an integrated program which is correspondent with national conditions and requirements. Therefore, cultural engineering and cultural management is necessary i.e. an integrated program that all cultural authorities can use it and act by it in micro and micro levels, regional, national and transnational levels. Higher education as an important social system and universities, because of their roles in producing and scattering knowledge and information, are domains which are strongly influenced by ICT. Importance of this subject is caused by this issue that effect of ICT, for creating golden opportunities and organizational challenges, organizing and changing attitudes of cultural engineering suitable for university, organizing cultural information system of universities and annual report and cultural condition of universities and higher education centers deserves study. ChavoshBashi (2012), with the aim of designing a model to measure effect of ICT in cultural development of Iran economy, found that key role of culture in cultural economy needs having a perspective, integrated planning, synergy and creative and enthusiastic society with ICT. In his research, elements like supporting cultural attractions, developing cultural resources, producing cultural creative industries and preserving historical works and cultural legacy and improving cultural knowledge of society have been emphasized. Al-Thawwad (2008) studied Saudi Arabia actions about importing technology and concluded that inter cultural non-conformity among countries in transferring technology will have inevitable effects on culture of host country and it is necessary to spend large part of technology importing budget for preserving and repairing culture of country. Chao and Li (2007) tried to criticize China

technology import from US with cultural look at the differences between US and China. They referred ethical differences between people of both countries in individualism in US and collectivisms in China and warned against influence of American new culture on deep china culture. Grounds for studying these views in transferring technology were investigated in case studies in expert level. Mirshamshiri (2006), with the objective of investigating the role of ICT in improving cultural management (case study: cultural-artistic organization of Tehran municipality), concluded that using ICT improves management in this organization. Mohammadi *et al.*, (2006) in a research plan titled "the study of students perception from culture engineering and cultural engineering and role of university in its development, concluded that awareness of two terms "culture engineering" and "cultural engineering" was low only among 9.02% of students and this is a weakness for our universities that have not paid attention to cultural issues and they cannot increase students' awareness in this regard. Regarding background and theoretical basics, figure 3 shows research model.
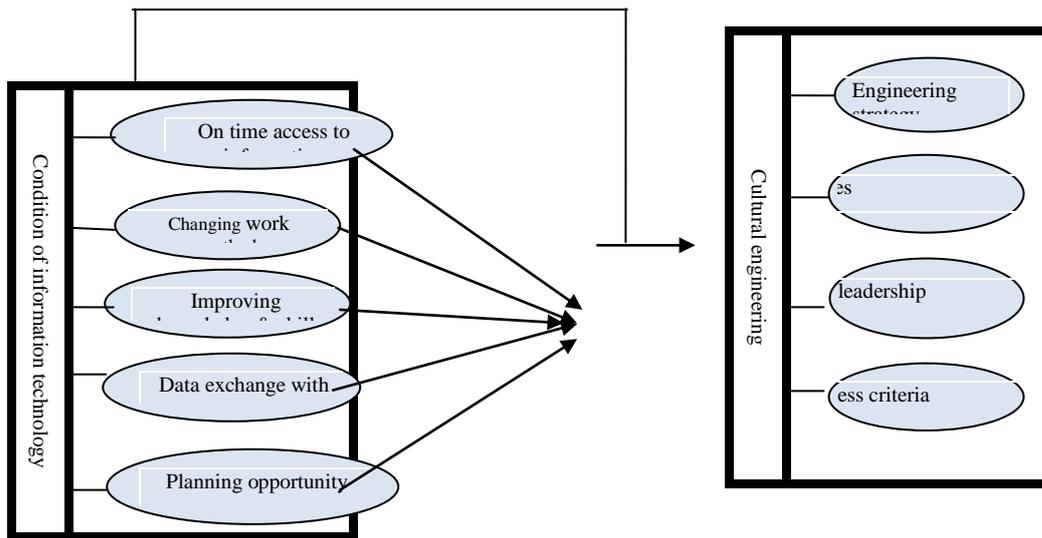


**Figure 2. Research conceptual model**

Based on theoretical and empirical basics, research hypotheses are as below: 1) how is cultural engineering and its items in male and female employees of Health Deputy; 2) what is the rate of applying cultural engineering and its items in male and female employees of health deputy? 3) There is a relationship between using ICT and its components in men; 4) there is a relationship between ICT in women.

**MATERIALS AND METHODS**
Research method is descriptive-correlational and its statistical sample is all employees of Mazandaran health deputy whom 117 of them participated in the study and 66 were male and 51 were female. Simple random sampling was used. Main data gathering instrument was researcher-constructed questionnaire which includes two questionnaires: ICT researcher-constructed questionnaire and cultural engineering researcher constructed questionnaire which is corresponding with study variables and is based on research theoretical frameworks. Validity of questionnaire was measured by Cronbach alpha as .86 for ICT and .84 for cultural engineering. In order to analyze data obtained by ICT scales and cultural engineering, SPSS 16 was used in descriptive level (mean and standard deviation) and in inferential level (Pearson correlation coefficient and uni-variate t-test).

**RESULTS**
Data showed that 53.3% of respondents were male and 46.7 were female who were working in health deputy of Mazandaran. 34.3% were 38-47 years old, 31.4 and were 28-37 years old, 20% were 48-57 years old, 12.4% were 27 years old and 1.9 % was more than 58 years old. 63.8% had B.A, 17.1% had M.A, 9.5 had PhD and 9.5% have upper diploma. 43.8% of respondents had 1-10 years' experience, 36.2% had between 11-20 years and 20% above were 20

years' experience.

**Table 1. Mean and standard deviation of cultural engineering and its items in male and female employees of health deputy**

| Dimensions | Gender | Mean | SD | Standard error | Uni-variate t |
|---|---|---|---|---|---|
| *Engineering strategy* | Male | 3/086 | 0/543 | 0/072 | 1/193 |
| | Female | 2/741 | 0/363 | 0/051 | -4/982 |
| *Core values* | Male | 2/585 | 0/518 | 0/069 | -5/986 |
| | Female | 2/635 | 0/584 | 0/083 | -4/370 |
| *Leadership* | Male | 2/863 | 0/443 | 0/059 | -2/305 |
| | Female | 2/883 | 0/434 | 0/062 | -1/874 |
| *Success criteria* | Male | 2/785 | 0/548 | 0/073 | -2/923 |
| | Female | 2/804 | 0/635 | 0/090 | -2/157 |
| *Cultural engineering* | Male | 2/823 | 0/368 | 0/049 | -3/593 |
| | Female | 2/807 | 0/398 | 0/056 | -3/390 |

Based on table (1) findings, in male employees, observed t in cultural engineering items (strategic engineering, core values, leadership and success criteria) was less than critical table value in 0.05 error level. Therefore, cultural engineering (core value, leadership and success) in men is less than average level (average level=3) but strategic engineering was higher than average. Also, in women, in cultural engineering items (strategic engineering, core clue, leadership and success), observed t was less than critical t in 0.05 error level. Therefore, all cultural engineering items in women were lower than average (average level=3).

**Table 2. Mean and standard deviation of ICT and its items in male and female employees in health deputy**

| Dimensions | Gender | Mean | SD | Standard error | Uni-variate t |
|---|---|---|---|---|---|
| *On time access to information* | Male | 3/198 | 0/396 | 0/052 | 3/748 |
| | Female | 3/127 | 0/467 | 0/066 | 1/907 |
| *Changing work method* | Male | 3/076 | 0/336 | 0/045 | 1/700 |
| | Feale | 3/030 | 0/424 | 0/060 | 0/499 |
| *Improving knowledge and skill* | Male | 3/063 | 0/380 | 0/050 | 1/245 |
| | Female | 3/013 | 0/371 | 0/053 | 0/257 |
| *Exchanging information with top management* | Male | 3/014 | 0/492 | 0/065 | 0/217 |
| | Female | 3/040 | 0/557 | 0/079 | 0/516 |
| *Planning opportunity for doing work* | Male | 3/107 | 0/426 | 0/056 | 1/881 |
| | Female | 3/089 | 0/393 | 0/056 | 1/596 |
| *ICT* | Male | 3/092 | 0/257 | 0/034 | 2/677 |
| | Female | 3/060 | 0/300 | 0/042 | 1/405 |

Based on table (2) findings, in male employees, observed t in ICT dimensions (on time access to information, changing work method, improving knowledge and skill, exchanging data with top management, planning opportunity) was larger than critical table value in 0.05 error level. Therefore, ICT dimensions in men was higher than (average level=3). Also, in women, in ICT dimensions, , observed t was higher than critical t (t=1.196) in 0.05 error level. Therefore, all ICT dimension in women are higher than (average level=3).

Based on table (3) findings, Pearson correlation coefficient between scores of strategic engineering and improving knowledge and skill and planning opportunity in doing work was significant in p<0.05 level, but the coefficient between strategic scores and access to information, changing work method and exchanging information with top management was not significant in p<0.05 level.

Pearson correlation coefficient was significant between core values items and on time access to information, changing work method, improving knowledge and skill and information exchange with top managers was significant in p<0.05 level but it was not significant between core values and planning opportunity in doing works in p<0.05 level. On the other hand, Pearson correlation coefficient was significant between leadership items scores and on time access to information, improving knowledge and skill and information exchange with top managers in p<0.05 but it was not significant between leadership and planning in doing work and changing work method in p<0.05.

**Table 3. Correlation between cultural engineering items and ICT items in male employees in health deputy**

| *Dimensions* | Access to on-time information | Changing work method | Improving knowledge and skill | Exchanging information with top management | Planning opportunity in doing work |
|---|---|---|---|---|---|
| *Engineering strategy* | =0/251r | =0/139r | =0/346r | =0/111r | =0/260r |
| | =0/062 sig | =0/307 sig | =0/009 sig | <0/415 sig | =0/038 sig |
| | 0/063 r² = | 0/019 r² = | 0/119 r² = | 0/012 r² = | 0/067 r² = |
| *Core values* | =0/480r | =0/293r | =0/573r | =0/268r | =0/277r |
| | =0/001 sig | =0/028 sig | =0/001 sig | =0/046 sig | =0/381 sig |
| | 0/230 r² = | 0/085 r² = | 0/328 r² = | 0/071 r² = | 0/076 r² = |
| *leadership* | =0/307r | =0/213r | =0/461r | =0/425r | =0/136r |
| | =0/21 sig | =0/115 sig | <0/001sig | =0/001 sig | =0/317 sig |
| | 0/094 r² = | 0/045 r² = | 0/212 r² = | 0/180 r² = | 0/0184 r² = |
| *Success criteria* | =0/346r | =0/229r | =0/275r | =0/080r | =0/180r |
| | =0/009 sig | =0/090 sig | =0/041 sig | =0/559 sig | =0/185 sig |
| | 0/119 r² = | 0/052 r² = | 0/075 r² = | 0/006 r² = | 0/032 r² = |

Also there was significant relationship between success criteria and on time information access, improving knowledge and skill in p<0.05 level but it was not significant between success criteria and changing work method, improving knowledge and skill and information exchange with managers and planning in doing work in p<0.05 level.

Based on determination factor (r2=0.329) variance of scores for core values and knowledge and skill improvement was similar. Therefore, the most similarity was in men based on determination factor between core values and improving common knowledge and skill. It means that intensity of these two items was higher than other items and there was a significant and positive relationship between these two items.

Also Pearson correlation coefficient was significant between cultural engineering and ICT scores in p<0.05 level (r=0.525, sig<0.001). it means that there was a positive and significant relationship between cultural engineering and ICT in men.

**Table 4. Correlation between cultural engineering items and ICT items in female employees in health deputy**

| *Dimensions* | Access to on-time information | Changing work method | Improving knowledge and skill | Exchanging information with top management | Planning opportunity in doing work |
|---|---|---|---|---|---|
| *Engineering strategy* | =0/164r | =0/458r | =0/476r | =0/492r | =0/138r |
| | =0/261 sig | =0/001 sig | =0/001 sig | <0/001 sig | =0/346 sig |
| | 0/026 r² = | 0/209 r² = | 0/226 r² = | 0/242 r² = | 0/019 r² = |
| *Core values* | =0/058r | =0/472r | =0/438r | =0/236r | =0/110r |
| | =0/693 sig | =0/001 sig | =0/002 sig | =0/102 sig | =0/452 sig |
| | 0/003 r² = | 0/222 r² = | 0/191 r² = | 0/055 r² = | 0/012 r² = |
| *leadership* | =0/463r | =0/431r | =0/333r | =0/152r | =0/152r |
| | =0/001 sig | =0/002 sig | =0/019 sig | =0/298 sig | =0/298 sig |
| | 0/214 r² = | 0/185 r² = | 0/110 r² = | 0/023 r² = | 0/023 r² = |
| *Success criteria* | =0/200r | =0/399r | =0/188r | =0/257r | =0/004r |
| | =0/169 sig | =0/005 sig | =0/196 sig | =0/075 sig | =0/978 sig |
| | 0/040 r² = | 0/159 r² = | 0/035 r² = | 0/066 r² = | 0/000 r² = |

Based on table (4) findings, Pearson correlation coefficient between scores of strategic engineering and changing work method and improving knowledge and skill was significant in p<0.05 level, but the coefficient between strategic scores and access to information, exchanging information with top management and planning opportunity was not significant in p<0.05 level.

Pearson correlation coefficient was significant between core values items and changing work method and improving knowledge and skill was significant in p<0.05 level but it was not significant between on time access to information, information exchange with top managers and planning opportunity in doing works in p<0.05 level. On the other hand, Pearson correlation coefficient was significant between leadership items scores and on time access to information,

changing work method, improving knowledge and skill in p<0.05 but it was not significant between leadership and planning in doing work in p<0.05.

Also there was significant relationship between success criteria and changing work method in p<0.05 level but it was not significant between success criteria and on time access to information, improving knowledge and skill and information exchange with managers and planning in doing work in p<0.05 level.

Based on determination factor (r2=0.329), variance of scores for strategic engineering and information exchange with top managers was similar. Therefore, the most similarity was in women based on determination factor between strategic engineering and information exchange with managers. Also Pearson correlation coefficient was significant between cultural engineering and ICT scores in p<0.05 level (r=0.525, sig<0.001). It means that there was a positive and significant relationship between cultural engineering and ICT in women.

## DISCUSSION AND CONCLUSION

Core value of cultural engineering for human society is vital and essential in information and communication age. Value is a salient and effective element of culture, like an air that social respiration is not possible without it, because elements of culture are influenced by values and values or rooted beliefs which are useful in encountering society members or groups with questions about goodness and badness (Rooshendaal Arbatani and Saberi, 2012). It is clear that reviving these values will flourish and create enthusiasm in social life.

Future organizations need new energy to re-energize organization; of course, this does not mean that organization structure should be transformed but improvement in skills and experts, reengineering systems and revising operation and activities, transformation and renewing financial and administrative and managerial structures along with discipline in thought or management method, in selecting solutions and approaches are all factors of reenergizing and increasing competencies of organization (Momeni, 2001).

A complex technology with uncertain environment requires that organization members and employees process more information to understand unexpected events and show suitable reaction against it. Mutual dependence between inter-organizational levels creates more communication and harmony between them. Therefore, organization should be planned such that in which information exchanges horizontally and vertically and organization reaches to its goals (Nadler and Tushman, 1988).

Generally, organization structure should be such to correspond information needs and if it was not so or if enough information did not reach individuals, they are forced to spend more times for processing unnecessary information which reduces efficacy of organization (Daft, 2002).

ICT, besides cultural influencing on societies, can create cultural changes but often, because of stability in society culture and gradual change, new technologies adapt with society and act as supporting behavioral models. New communication technologies have not neutral load but they are part of culture and created in cultural bed of society.
Generally, new communication technologies have various messages which seem that the most important message is imagined in culture. Every communication and exchanging information between two people is function of cultural factors and causes a certain perception in the mind of receiver. Culture is common language for mutual understanding in all information exchange and provides possibility of communication and dialogue. Decision-making in information technology and using hardware and software needs identifying cultural grounds, defining some new relations and processes and including new tools in a set which with enough recognition, feels revolutions from inside (Rooshandel Arabtani and Saberi, 2012).

This study tried to move a step forward and conducts this study along with male and female employees of health deputy and it is an attempt for improving culture and quality of service based on ICT. Mean cultural engineering and its related items (core values, leadership, success criteria) in male and female employees of health deputy was lower than average. Other items were low in men and all items were low in women. This means that strategic engineering was stronger in men than other items.

Results showed that mean of ICT and all its dimensions in male and female employees in health deputy was higher than average which shows that they are enjoying strong ICT. There was significant and positive relationship between cultural engineering and ICT in male and female employees in health deputy. It means that increase in ICT increases cultural engineering in men. Based on determination factor (r2=0.328), variance of core values item and improving knowledge and skill was shared. Therefore, most commonality was between core values and improving knowledge and skill. This means that human resources have special importance relative to natural and financial resources, such that in this thought system role of knowledge, information, innovation, creativity, discipline and management is recognized as real resources of creating economic and social values. This creates a heavier responsibility for universities, scientific and research centers such that there is a need to create intellectual revolutions in management and revising missions and strategies of higher education system.

Also in women employed in health deputy, there was a significant and positive relationship between cultural engineering and ICT i.e. by increasing and enhancing ICT, cultural engineering increases in women. Based on determination factor (r2=0.242), variance of strategic engineering scores and information exchange with managers was shared. Therefore, there was commonality between strategic engineering and information exchange between strategic engineering and information exchange with top managers in women. This means that cultural engineering is a strategic movement in culture. This strategy deals with policy-making and macro decision making in culture levels. Strategic management emphasizes new role of managers and preserving dynamism even after establishment and stability of organization, because the most important challenge facing managers is speed of environmental changes in organizations. Factors like social nature, economic and political technology affect success or failure of organizations. Management is looking forward and shows importance of planning in the world. Strategic management means organized attempts to make decisions and suitable actions from available options. There is no doubt that correct exploitation of strategic management technique and knowledge can provide membership and prediction and activates our success against potential and real threats in present and future and changes it to active and innovative state. Therefore, new communication technologies are not neutral but they are part of culture and have created in cultural ground. Generally, new communication technologies have different messages which seem that the most important of them is seen in culture. Every communication and information exchange between two people is dependent on cultural factors and it creates a certain conception in mind of receiver.

## REFERENCES

**Afkhami Aqda M. (2013).** The effect of ICT on education Frayndtlym Yazd student's perspective. *J. School Health.* Yazd. Eleventh year. No. 1.

**Al- Thawwad M. (2008).** Technology Transfer and Sustainability- Adapting Factors.

**Bonyanian H. (2007).** In terms of cultural engineering to operate in Iran, Tehran: Secretariat of the SCCR, provided Drkhlash Proceedings First National Conference - Cultural Engineering. 12-17.

**Chao P. and Li W. (2007).** The Challenge Of Technology Transfer From The U.S.

**Chavoshbashi F. (2012).** A model designed to assess the impact of ICT on the development Economic of Cultural Management in Iran Magazine, Issue XI.

**Daft R. (2002).** Organization design theory. Translated by Parsaeean, A,. and Arabi, A. Tehran: cultural researches. : 62.

**Dunleavy P. (1991).** Democracy, Bureavcracy and Public choice: Economic5 Explanations in Political Science, Hemel Hompstead: Harvester Wheatsheaf.

**Hassanzadeh M. (2006).** Knowledge management concepts and substructors. Tehran: librarian.

**Ibrahimian H. (2012).** Rereading cultural engineering: cultural pathology in higher education. *Soft Power Studies J.* No. 5.

**Karahanna E., Evaristo JR. and Srite M. (2005).** Levels of Culture and Individual Behavior: An Integrative Perspective. *J. Global Info. Management.* 13(2): 120.

**Leader R. (2005).** The members of the Council of the Cultural Revolution years, 2005

Matthew Mitchell and Bill Gillis. Making Sense of the Relationship between Information Communication Technologies and Economic Development, Washington State University / Center to Bridge the Digital Divide.

**Mirshamshiri M. (2006).** Impression and the effect of globalization on education and higher education systems. Proceedings of the First National Conference on Globalization and Education. School of Education and Psychology, Tehran University.

**Mohammadi M., Fazlollahi SF. and  Izadiyeganeg M. (2006).** Evaluate the scientific productivity of faculty members at Islamic Azad University, Qom and its pathology, Qom, Qom Branch, Islamic Azad University.

**Mokhber Dezfuli M. (2007).** The role of cultural engineering to reduce social pathologies. Two weekly cultural engineering. No. 5.

**Momeni H. (2001).** ICT management. Tehran, University publication center.

**Nadler D. and Tushman M. (1988).** Strategic organization Design ,Glenview. Scott Foresman, :15.

**Reshadatjou H. (2005).** Globalization and Human Resource Management. Reply higher education. Proceedings of the Conference on Higher Education and Sustainable Development, Institute for Research and Planning in Higher Education.

**Robins K. and Webster F. (2006).** The era of technological culture, Translated by Mehdi Davoudi,  from the information society to the virtual life.

**Rooshandel Arbatani T. and Saber M. (2012).** The relationship between culture and ICT and cultural damages of internet. Interdisciplinary study in media and culture, Human Sciences and Cultural Studies research center, no. 2.

**Schulte J. (2004).** Critical look at the phenomenon of globalization. Art, Ian Schulte, the translation Masoud Karbasian. Tehran: Scientific and Cultural Publications.

**Sharbatian M. (2012).** Reflecting the importance of cultural engineering position in the sustainable development of rural communities, *cultural engineering J.* No. 59 and 60.

**Stensaker B., Massen P. and Borgan M. (2007).** Use,updating integration of ICT in higher education. Linking purpous people and pedagogy. *Higher Edu.* 54: 417-433.