



Investigating the Relationship between the Use of ICT and Human Resource Empowerment in Iran Municipality (case study: Mazandaran Province)

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Abstract

This Research was a push to look into the association amongst information and correspondence innovation (ICT) and its parts with authorisation of Mazandaran region specialists as administrative organizations. "Research Philosophy" amid this examination was distinct and correspondence. to fulfill the point of this examination, 152 laborers were hand-picked from among a total scope of 250 populace upheld agent inspecting abuse Krejcie and Morgan testing table. "The data assortmenttools" comprised of 2 standard surveys, and in addition ICT shapes (%96 legitimacy) and authorisation poll eighty sevenvalidity). "The data examination technique" was inferential measurements leading by SPSS and LISREL code. "The outcomes" demonstrated that there was a major connection amongst ICT and authorisation. Additionally, that there was a major connection between ICT parts include: "robotization", "preparing", "capacity", "advising" and "correspondence", and authorisation. On the contrary hand, the connection amongst ICT and authorisation by statistic qualities partition demonstrated that there's a major connected math distinctionwithin the level of relationship amongst's ICT and authorisation in a few instructional groups, anyway there's not a major connected math refinement inside the level of connection between's 2 groups of sexual orientation and 3 groups of work skill. At long last, the association amongst ICT and information administration demonstrate upheld work Files of, appropriately assessed.

Key words: Information and Communication Technology (ICT), empowerment, staff

1. Introduction

Relying increasingly on activities related to the production, distribution and use of data, led many major industrial countries, call today's world as information society, and the current era as the information age (Mohammadi et al., 2012). In fact, it can be said that ICT is a powerful tool that prepares managers to cope with changes in today's world (Laudon & Laudon, 2013). Today, the educated and skilled workers are another reason for the need for organized and progress innovation, which exists in nature and principle of intelligently works (Drucker, 1999). IT is the use of computers and other technologies to work with the information (Etebarian et al., 2015) that will be included issues related to advanced topics of computer science and technology, implementation of information systems and applications (Bahramzadeh & Jafarpoor , 2011). ICT is a branch of technology, which enables the study and application of data and its processing in the fields of storage, manipulation, transmission, management and automated control by the use of hardware, software and network (Fathian & Mahdavi nour, 2013).

Today, the most important of organization competitive advantage is the human resources of its generator (Abtin. et al., 2010). So the empowerment of the human resource is considered as one of the most useful tools to improve the quality of managers and increase the effectiveness organizations (Taghvaei, 2015). Psychological

empowerment can have an impact on many of their personality traits and professional life (Zhou et al., 2012). Although the empowerment enables managers to take advantage of the knowledge, skills and experience of everyone in the organization, but unfortunately there are a small number of managers and those who know the way of creating a culture of empowerment (Vares, 2008). In the ever-changing world of new organizational, competitive and turbulent environment, the traditional management principles and organization, such as bureaucracy, command and control has been attacked. Human resources should not be plagued by bureaucracy to show their talents and creativity, but also they must be able to use their potential abilities and solve problems (Abdullahi, 2011). Organizations in this situation, are in need of capable, autonomous, entrepreneurial, responsible and innovative human resources. Such organizations must be designed so that all employees involved in the processes of planning, decision-making and in determining the goals (Hardy & Leiba O'Sullivan, 1998).

Experts followed the Organic Approach defined empowerment based on personal beliefs and orientations of employees to their role in job and the organization (Abdullahi,2011). The empowerment is defined vary different among scientists. Conger and Kanungo (1998) proposed the first definitions of empowerment (Oboudi et al., 2014). Conger and Kanungo (1988) considered empowerment the process of increasing their sense of

efficacy in people through the identification and elimination of conditions that cause employees's disability. Peng & Heim (2010), considered empowerment as a set of systems, methods and processes, which are used through development of the capabilities and competence of people to improve and increase productivity, development, growth and prosperity of the organization and human resources with regards to the goals of the organization. One of the most important studies about the empowerment of by Spritzer (1992) is psychological empowerment (the process of increasing internal motivation), which has four dimensions including sense of choice, meaningfulness, competence, and effectiveness. Mishra's (1992) also added confidence as another dimension to the mentioned dimensions, and thus five key dimensions of empowerment was formed (Ahmadi et al.,2010). choice: a sense of right of choice means freedom and independence to determine the necessary activities to perform job duties. Competence: the degree to which a person can do the job with skill and successfully (Thomas & Velthouse, 1990). Effectiveness: the degree to which the individual may effect on the results of the strategic, administrative and operational jobs. meaningfulness: an opportunity for people to feel that their career goals are important and valuable. confidence: refers to the relationships between superiors and subordinates(manager's trust to employee, and vice versa) (Spritzer, 1995). The use of tools based on information technology by experts is the most important factor in the survival of the organization, so the quality and capacity of human resources in the use of information technology in order to perform their duties has great importance (Oladzad & Jamshidi, 2015). Perhaps the most important information technology support is providing accurate and timely information, with quality and affordable. In addition, technology is able to provide information and new tools that enhance the creativity and productivity of employees and the quality of their work (Quinn, 2004).

A few explores important to this exploration was directed, which some of them are said beneath: Bahramzadeh and Faqani (2015), find in an examination entitled "The connection amongst ICT and with mental strengthening and inventiveness of staff" that there is a noteworthy connection amongst ICT and mental strengthening. There is likewise a negative connection amongst ICT and the strengthening components, for example, the fitness and viability of a positive relationship and the privilege of decision. Taghvaei (2015), finds in an examination entitled "The connection amongst IT and administrators mental strengthening" that there is a huge connection between data innovation and mental strengthening and its segments barring ability. Romania, et al. (2014), in an investigation entitled "The part of data innovation on the staff strengthening" accomplished that there is a noteworthy connection between data innovation and the strengthening. Kamalian and et al.,(2013), in an examination entitled "The part of data innovation on staff strengthening" found that there is a critical positive connection amongst ICT and strengthening. And also the level of staff strengthening is higher than normal, and their strengthening regarding more capability and adequacy is not as much as different parts of strengthening. Jamali and et al.(2013), accomplished in an investigation entitled "The Effect of ICT on Strengthening of Educators" that the utilization of ICT is essentially compelling in change of the execution quality and increment the obligation of basic leadership , yet utilize ICT has no impact on autonomy and opportunity of their activity. Jafaei Rahni and et al. (2011), accomplished in an examination entitled "The effect of data innovation on staff strengthening" that there is a critical connection between data innovation and worker strengthening. The aftereffects of its auxiliary speculations demonstrate that: the foundation of data innovation causes: the advancement of feeling of fitness of the person in the association, the advancement of a feeling of self-rule of the person in the association, the advancement of a feeling of the adequacy of the person in the association, the advancement of trust between individuals. Hamedi (2010), accomplished in an examination

entitled "The effect of data innovation on staff strengthening" that ICT has constructive outcome on staff strengthening. Ardeshiri (2010), accomplished in an investigation entitled "The part of data innovation and its effect on staff strengthening" that there is a critical connection amongst equipment and programming components and staff preparing in the field of data innovation and the impact of data innovation on Training staff strengthening is seen at high and now and then abnormal state. Hamidi and et al. (2009), accomplished in an examination entitled "The utilization of IT in the staff strengthening" that utilizing data innovation prompts increment the speed of administration by staff, directed assignments, work fulfillment, and at last proficient imagination of library staff. Larsenv(2009), accomplished in an investigation entitled "The Effect of ICT on HR in the association" that data innovation as a directing variable, expands cooperation of staff and builds staff fulfillment and subsequently is viable in the adequacy and proficiency of all group exercises of the gathering. This investigation was the premise of Damghanian and et al.(2013) ICT and the strengthening Spritzer and Mishra(1995).

Considering that reviews demonstrate that there is immediate connection amongst ICT and strengthening, one of the objectives of supervisors in the association is to advance and put resources into the correct innovations to engage and improve the profitability of the association. This exploration looks to answer this primary inquiry: "Is there a connection amongst ICT and strengthening of Mazandaran region staff? In accordance with the former inquiry, the accompanying speculations were expressed:

- H1: There is a huge connection amongst ICTs and strengthening.
- H2: There is a huge connection amongst ICT and its segments and segment of strengthening.
- H3: There is a noteworthy contrast amongst ICT and strengthening by statistic attributes (sexual orientation, instruction, work involvement).

2. Methodology

The second speculation: there's a major connection amongst ICT and its parts and part of authorisation.152 staff(including 36 ladies and 116 men, 24 individuals with instruction level of certificate/relate degree, 75 lone wolves and 53 MSc/PhD, 63 individuals with work encounter under 5 years, 71 individuals between 5-15 years and 18 individuals over 15 years) were chosen from among an aggregate number of 250 populace in light of stratified inspecting utilizing Morgan testing table. The information gathering devices comprised of two standard surveys: ICT polls of Damghanian and et al. which had 28 inquiries with the legitimacy of 96%, was intended to gauge parts: mechanization, handling, stockpiling, advising, correspondences. The second one was enabling polls of Spritzer and Mishra incorporating 15 inquiries with the legitimacy of 87% was utilized to gauge highlights: Decision, seriousness, competency, adequacy, Certainty. The information investigation technique was inferential insights (Pearson connection and relationship examination of two autonomous gatherings Z-Fisher test, connection correlation for three free gatherings through planned test) leading by SPSS (show under test t) and LISREL auxiliary conditions

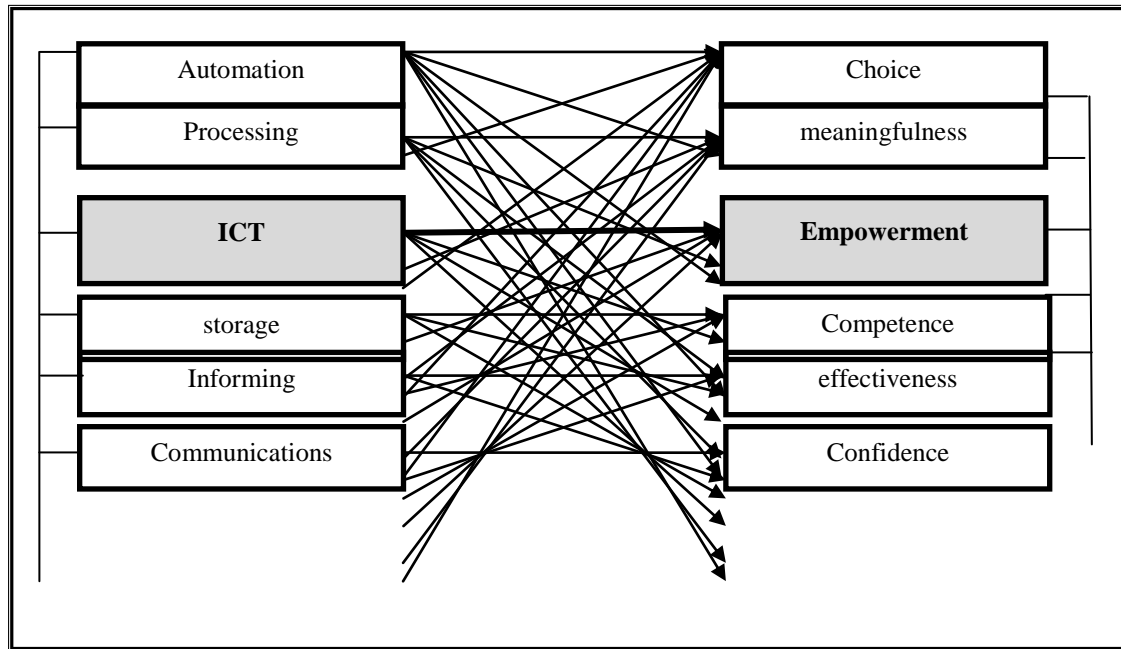


Figure1: Analytical model between ICT and KM (self-made)

3. Results

$H_0: r=0$
 $H_1: r \neq 0$

- **The first hypothesis (the main):** There is a significant relation between ICT and empowerment.

Table1: Relationship between ICT and empowerment

Criterion variable	Predictive variable	Empowerment	
		Indices	
ICT			$r= 0.64^{**}$
			$R^2= 0.41$
			Sig= 0.000
			N= 152

** In 0/99 was significant.

As results showed in Table1 there's a major connection amongst ICT and authorisation in Mazandaran region specialists, because of the learned centrality level (Sig=0.000) isn't up to the value of the normal mistake (0.01) . Thusly, with ninety nine the degree of certainty the H0 theory was rejected and H1 speculation was affirmed. On the contrary hand, mulling over the steady of assurance (R2), is same 0.41 of alterations in authorisation relies upon the difference in one information and correspondence innovation, and furthermore the lay relies upon various elements.

$H_0: r=0$

$H_1: r \neq 0$

It is noticed that because of the second speculation, as indicated by Table2, ICT and parts thereof(including Robotization, Handling, Stockpiling, Illuminating and Correspondence) with the segments of strengthening (counting Appropriate to pick, Importance, Skill, Adequacy, Trust) were examined and dissected.

- The second theory: There is a critical connection amongst ICT and its segments and part of strengthening.

Table2: Relationship between ICT and its components and elements of KM

Criterion variables		Predictive variables	Indices	Empowerment				
				Choice	Meaningfulness	Competence	Effectiveness	Confidence
ICT		r	0.44**	0.56**	0.51**	0.53**	0.39**	
		R ²	0/20	0.31	0.26	0.28	0.15	
		Sig	0.000	0.000	0.000	0.000	0.000	
Components of ICT	Automation	r	0.30**	0.47**	0.47**	0.44**	0.34**	
		R ²	0.09	0.22	0.23	0.20	0.11	
		Sig	0/000	0.000	0.000	0.000	0.000	
	Processing	r	0.40**	0.56**	0.39**	0.58**	0.40**	
		R ²	0.16	0.31	0.15	0.34	0.16	
		Sig	0.000	0.000	0.000	0.000	0.000	
	Storage	r	0.42**	0.30**	0.41**	0.32**	0.19*	
		R ²	0.18	0.09	0.17	0.10	0.04	

	Informing	Sig	0.000	0.000	0.000	0.000	0.016
		r	0.41**	0.51**	0.45**	0.41**	0.32**
		R ²	0.17	0.26	0.20	0.17	0.10
	Communication	Sig	0.000	0.000	0.000	0.000	0.000
		r	0.35**	0.50**	0.44**	0.45**	0.34**
		R ²	0.12	0.25	0.20	0.20	0.11
	Sig	0.000	0.000	0.000	0.000	0.000	

** In 0/99 was significant.

In 0/95 was significant.

As results showed in Table1 there's a major connection amongst ICT and authorisation in Mazandaran region specialists, because of the found out criticalness level (Sig=0.000) isn't up to the value of the normal mistake (0.01) . Hence, with ninety nine the degree of certainty the H0 theory was rejected and H1 speculation was affirmed. On the contrary hand, thinking about the steady of assurance (R2), is same zero.41 of adjustments in authorisation

relies upon the difference in one information and correspondence innovation, and furthermore the lay relies upon various elements.

•The third speculation. There is a critical distinction amongst ICT and strengthening by statistic qualities division (sex, instruction, work understanding).

$$H_0: \rho_1 = \rho_2$$

$$H_1: \rho_1 \neq \rho_2$$

Table3: Comparison of relation between ICT and staff empowerment by demographic characteristics separation

Criterion variable	Predictive variable	Demographic Characteristics	Empowerment	N	Test Statistics	P (two tailed)
ICT	Gender	Female	0.51**	36	1.25 ^a	0.2113
		Male	0.67**	116		
	Education	Diploma/ associate degree	0.91**	24	13.3575 ^b	0.0013**
		Bachelors	0.51**	75		
		MSc / PhD	0.68**	53		
	Work Experience	X<5	0.53**	63	4.5214 ^b	0.1043
		5-15	0.67**	71		
		15<X	0.82**	18		

** In 0/99 was significant.

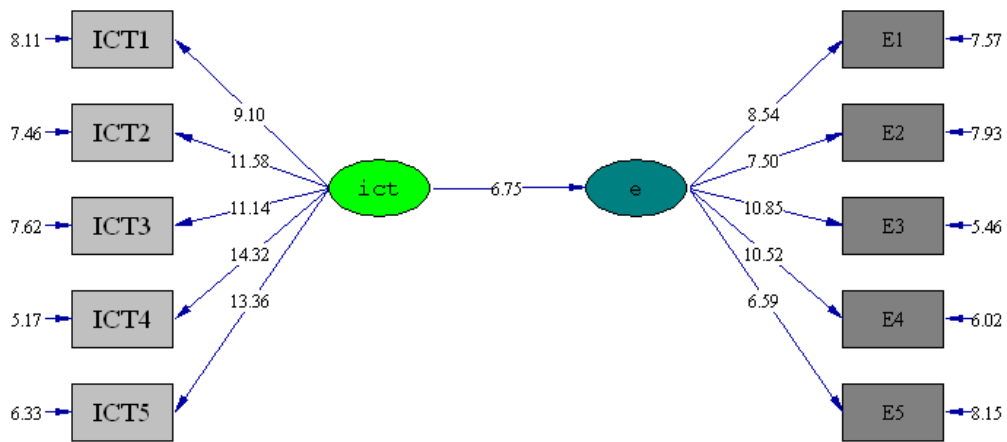
a. Z-Fisher test

b. Prospective test

The results in Table 3 showed that the assumptions of different correlation between ICT and empowerment by demographic characteristics separation can be explained as follows: There is a significant difference in the level of correlation between different

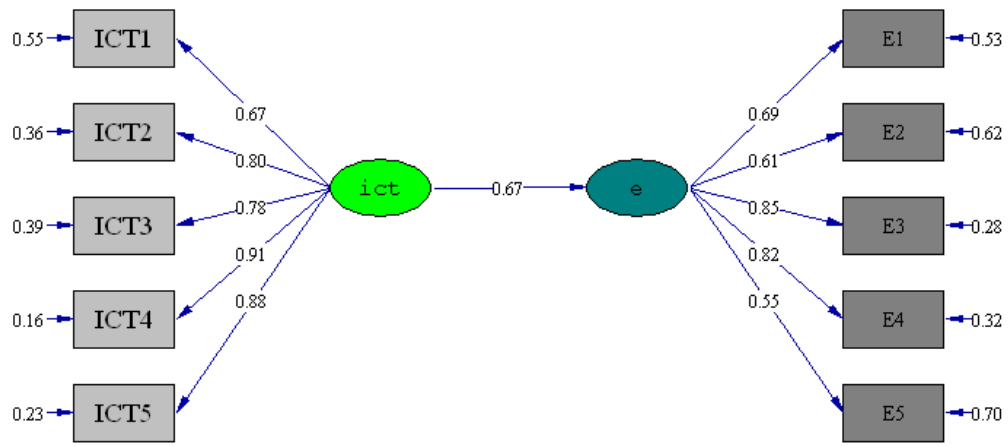
educational groups (P <0.05), but there is not a significant difference in the correlation between two groups of gender and three groups of work experience (P> 0.05).

The results are listed below:



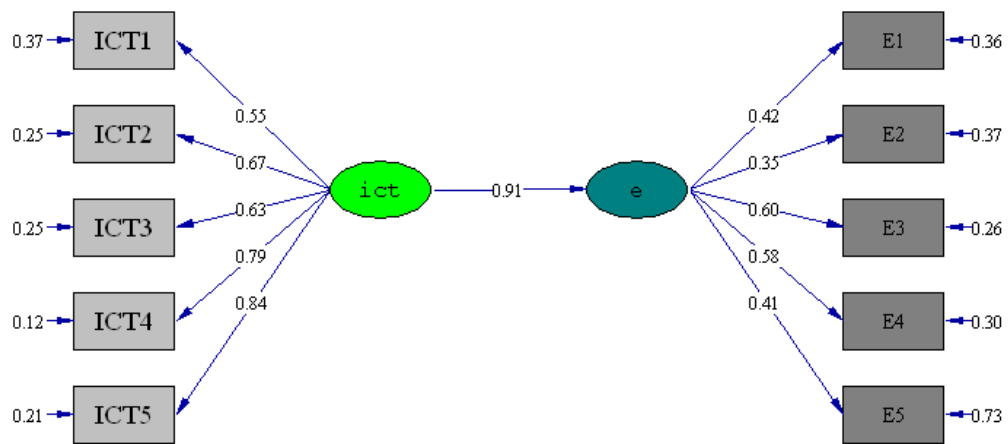
Chi-Square=193.32, df=34, P-value=0.00000, RMSEA=0.177

Figure2: T-test Direction analysis



Chi-Square=193.32, df=34, P-value=0.00000, RMSEA=0.177

Figure3: Standardized coefficients Direction analysis



Chi-Square=193.32, df=34, P-value=0.00000, RMSEA=0.177

Figure4: Non- standard coefficients model analysis

Table4: estimating indices model

Fit Index	Estimated value
Chi-Square	193.32
Degrees of Freedom (DF)	34
Chi-Square/ Degrees of Freedom	5.68
Root Mean Square Error of Approximation (RMSEA)	0.177
Root Mean Square Residual (RMR)	0.064
Standardized Root Mean Square Residual (SRMR)	0.084
Normed Fit Index (NFI)	0.89
Non-Normed Fit Index (NNFI)	0.87
Comparative Fit Index (CFI)	0.90
Goodness of Fit Index (GFI)	0.80
Adjusted Goodness of Fit Index (AGFI)	0.67

Table4 demonstrated that the value of chi-square(χ^2) was 193.32 and degrees of flexibility was thirty four, in this manner the extent connection estimation of the chi-square to level of opportunity was 5.68. The littler this value is, closer to one, the model is extra appropriate(Preferably it should be below3). The ascertained Root Mean sq. Blunder of Approximation(RMSEA) was 0.177 that was inside the differ of $0.1 < X < 0.5$ and painted the direct standing. the establishment Mean sq. Residual(RMR) was 0.06 that was inside the differ of $0.05 < X < 0.08$ and painted the direct standing. The Relative work Record was inside the shift of $0.7 < X < 0.9$ and painted the direct standing The Normed work Index(NFI) was 0.89, and furthermore the Goodness of work Index(GFI) was 0.80

and furthermore the Balanced Integrity of work Index(AGFI) was 0.67. Generally, regardless of customary to such an extent that model, the arranged model was relate pertinent model. This hypothesis(i.e. there's a connection amongst ICT and strengthening), was acknowledged with the level of 0.05.

4. Conclusion

The aftereffects of the examination showed that there was a huge connection amongst ICT and strengthening. There was a critical connection amongst ICT and its segments and segment of

strengthening. These discoveries are in accordance with Bahramzadeh and Faqani(2015), Kamalian and et al.(2013), Jamali and et al.(2013), Bina and Mathoor(2012), Jafaei Rahni and et al.(2011), Hamed(2010). It was likewise discovered that there is a huge distinction in the connection amongst ICT and strengthening in partitioned instructive gathering, yet there is certainly not a huge contrast in light of sexual orientation and work involvement. This finding is in accordance with Jamshidi and et al.(2008), Balouchi and Sam Ara(2015), Dimitriades and Kufidu(2003); yet it isn't in accordance with Ayat and Vaezian(2011) Kazemi and Morshedi(2013).

At long last, model of the connection amongst ICT and strengthening was tried, and was viewed as suitable in light of Integrity of Fit records. The need to use new information and communication technologies in the municipality of Mazandaran caused the managers of the organization think about using this technology in the educational system and thereby increase the effectiveness of the organization by empowering staff. However, the important issue is the high cost of establishment, implementation, maintenance and development of these technologies in the organization. It is necessary that senior managers before implementation these technologies estimate the funds needed, and give priority to investment in the empowerment technologies.

On the other hand, human resource is the most important asset of an organization, which is essential to pay attention to their ability in order to achieve its strategic objectives. Accordingly, with regard to the overall results obtained from this study and similar studies, it could be concluded that there is a significant difference between ICT and empowerment in different educational groups, but there is not a significant difference in between two groups of gender and three groups of work experience. Jamshidi et al. (1387) and Dimitriades & Kufidu (2003) confirmed this in their study and concluded that there is no difference between male and female experts in terms of psychological empowerment, while men can play a major role in women's empowerment.

Basically, staff empowerment is achieved in two ways: (1) remove the factors that impeded their activities (2) increase their ability and capability. Education is the most important factor that must be considered in the context of empowerment, this component does not recognize the limitations of demographic and demographic is necessary for every person in every situation. Today, other policies can also be effective in staff empowerment in addition to education, including the use of collaborative management. International experience has shown that the presence of men and women in public arena and decision-making has helped to reform the administrative system and improve the quality of public services in developing countries.

According to the results of this study some solutions can be suggested to improve the relationship between ICT and empowerment and also strengthening empowerment at different levels of education:

- As the results of numerous studies and also this study showed, in order to more efficient use of ICT to identify the needs of different parts of the organization it is important to choose the appropriate ICT and update them, achieve the best and most suitable technological tools. It is also necessary to take some measures to empower staff such as educational courses, provide the necessary training to understand the technological tools and the way to use them, hold ICDL classes, help staff make decisions and create autonomous teams, implement incentive policies by managers associated with the staff use of ICT facilities, managers attention to staff comments and suggestions to develop training programs and update and enhance ICT in the organization.

- Other results showed that those staff who have diploma / associate degree are more capable than staff with an academic education because of technical and vocational degree; so in order

to strengthen the empowerment of organizations disabled staff, the success of staff powerment will increase by the use of those ICT that are more affordable by the disabled staff using, more investment in suitable information banks, training to disable staff, meetings, staff active participation in making the decisions, more importance to creative ideas by disable staff, courses such as teamwork, internet, intranet and other technologies. Of course, these activities will be effective in each group.

- In short, technology's growth has been quick and unpredictable in the past two decades, and this growth has been more in the field of information and communication progress. Accordingly, the competition in today's organizations is the competition for information and communication technology. The most important asset is its human resources. So the organization with appropriate and justifiable investment for ICT to empower human resources has made a significant contribution to organization growth.

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