

Identifying and Ranking the Effect of Applying Information and Communication Technology (ICT) on reflection of thoughts, registering thoughts, ideas and experiences of Staff

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Abstract: The objective of the present study is to identify and rank the effect of apply ICT on planning the personal development of the staff working in Electricity Distribution Company of Chaharmahal and Bakhtiari Province in 2014. Therefore, in terms of objective, the present study is applied and in terms of method, it is a descriptive study employing survey research for collecting data. The population of the study includes all the staff working in Electricity Distribution Company of Chaharmahal and Bakhtiari Province. In the present study, to predict the sample size, stratified random sampling proportionate to population size was employed. The research instrument was a researcher-made questionnaire evaluating five aspects including the effect of applying ICT on the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks. To determine the formal and content validity of the questionnaire, Delphi method was used; it was submitted to the professors, expert at HRM, several times and in each time, the amendments was applied in the questionnaire. The reliability of the questionnaire was determined as 0.98 which indicate appropriate reliability for the instrument. To analyze the data, t-test and ANOVA, and Friedman's test were used. The findings of the research indicate that firstly, the mean score of the effect of applying ICT on each of the employee's personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) is higher than the moderate level and statistically significant. The results of Freidman's test indicated that ranking the effect of ICT on each of the dimension of personal development are implementing tasks, registering thoughts, ideas and experiences, evaluating tasks, planning tasks, the reflection of thoughts and ideas of the staff respectively.

Key words: Technology: ICT: Reflection of thoughts, Ideas, Registering thoughts, Experiences

1. Introduction

One of the main concerns of managers of small and big organizations is the performance of the staff. Organizations annually invest tremendous amount of money for on their human resources to be able to reduce costs, increase quality, enhance flexibility and customers' satisfaction and improve operations in general. But, always, the concern of the executives of development planning in the private sector is whether these investments are effective in the performance of companies. In fact, it can be said that the survival of activities of companies and institutions depends on the efficacy and efficiency of the staff's performance. Fundamental transformation in organizations has been so quick in recent decades that management of organizations is more complex than ever. Human forces in each country are the biggest capital and resource of organizations. Human resources of each country can change cultural, social, political, economic etc. structures (Nazem and Hamoudi, 2006).

Nowadays, successful organizations have found out that with moving in the path of human development and improving consistently educational system, they are able to realize personal and organizational productivity. A lot of scholars, along with technological advancements and the increase in the capacity of different dimensions of organizational development consider paying attention to educational and personal development of human resources as important factors and know it as the important requirements of advancing organizational objectives. Nowadays, the theory of human capital stating the role of education and personal development of human resource has been considered seriously and the emphasis on the necessity of education and learning as instruments of nurturing potentialities and capabilities are considered as the main point of this theory because appropriate use of human resources is considered as the most valuable capital of each organization. Therefore, one of the most important functions in HRM is optimization and development of human capital is the organization. Accordingly, paying a comprehensive attention to the realm of personal and development of human resources is the main

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concerns of management in the present age. Therefore, matching human forces with new conditions and changing workplaces as well as increasing perceptive, human and technical skills in the staff and promoting productivity and helping to realization of organizational objectives is only possible through education and optimization. If educational plans in organizations are executed efficiently with favorable conditions and requirements, they are important role in dynamics and development of organizations (Naderi et al., 2006). One of the factors which cause that personal development of the staff increase is the degree of applying ICT in organizations.

Nowadays, in quickly changing and competitive business environment, the access to accurate, timely and related information plays an important role in such a way that many of the activities of organizations such as business decision making, prediction and analysis depend on this information. IT is a tool capable to realize the information needs of organizations and help them in attaining their objectives. In fact, IT is a combination of telecommunication achievement, methods and strategies of problem solving and the ability to direct using software and hardware knowledge. It includes issues related to discussions of advanced computer sciences, technology as well as designing and implementing information systems and their applications (Manian et al., 2009).

Technology is the scientific and intellectual gift of human beings given by the Industrial Revolution which has had the most influence on organizations. The grounds of this effect have covered all dimensions of organization and the realm of the technological effects on organizations is so great that they have created worries and hopes in organizations. Worries such as losing skills, unemployment, changing organizational position and etc. and hopes such as long-term visions of achievement, organizations' speed operation and etc. (Chupani et al., 2009).

Systems and strategies based on ICT as efficient and effective instruments increasingly are used by organizations, offices, and industries, and this development and growth have advanced as deeply that information systems widely and diversely are changed into infrastructural and fundamental systems. In recent years, all over the world, using IT in organizations, small or big, service or productive, profit or non-profit, has increased and has had positive influences on the performance of the staff (Ejlali, 2011).

However pervious researches has contributed to the understanding of using IT by experts of HRM (Gueutal, 2005), this issue that how IT can influence the performance of the unit of human resources and their personal development, has not been properly investigated. On the other hand, the managers of organizations are interested to measure the value added of IT in the domain of their human resources. To do so, they are required to be informed of the effect of IT on the personal development of the staff.

Therefore, the present study is to identify and rank the effect of apply ICT on planning the personal development of the staff working in Electricity Distribution Company of Chaharmahal and Bakhtiari Province.

2. Theoretical framework

2.1. ICT

The word technology originates from the Greek word *tekne* and *logie*, which is translated into Persian as studying skills. *Tekne* is against *arke*. *Arke* means those which have been in human life, while, *tekne* is means skills and arts, those absent in the ancient and previous times are added to the nature by human being. In other words, human being has created the technical environment which is artificial against natural environment. *Logie* originates from *logos* means the reason dominant over the world (Asadi, 1990).

Technology refers to a set of knowledge, products, processes, tools and instruments, methods and systems applied in producing goods and services. In other words, technology means the method of doing activities (Khalil, 2000: 1).

In general, IT refers to studying, designing and implementing hard ware and software systems applied for processing, keeping, collecting, sorting, distributing, transferring and protecting information (Gunasekaran and Ngai, 2004).

IT can be defined as a set of computer system used in organizations. In a more accurate definition, IT refers to a technological aspect of information systems and includes software, hardware, databases, networks and other electronic equipment. IT can be considered as a periphery system of information system. Sometimes, the word T and information system are used interchangeably (Sepahvan et al., 2011).

IT refers to the process of production, sorting, processing, publishing, transferring and exchanging information through telecommunication capacities and media such as radios, TV, and techniques such as computers and telecommunication which using them makes establishing justice in access to the public information resources and the possibility of interaction with other groups possible (Mathur and Ambani, 2005).

In fact, ICT as a comprehensive technology has influenced different aspects of our lives and it has covered a wide range of changes in life patterns, education, management, business, transportation, entertainment, and government. In fact, nowadays, concepts such as power and authority are meaningful under the shadow of modern information technology and neglecting it means not having an appropriate status in the age of information. Because power, as a limiting factor for politics, culture and authority, with the constructive structures, has been concerned with these cases, the lack of application of modern technologies can change the face of countries. The increase in the

authority of citizens via accessing to information, improving the relationship state organizations with commerce and industry, increasing accuracy and clarity on state tasks, growing state incomes and increasing state costs, creating better feeling in social participation, the role of participation in planning, and promoting efficacy of economic systems are all the advantages and capabilities which are not possible except by IT (Mohammadi et al., 2013).

The lack of expansion of IT has influenced all dimensions of human life. One of the reasons of administrative corruption is the lack of clear structures in doing affairs. In unclear administrative environments, doing corruptive behaviors are facilitated. IT, by influencing the components of reducing administrative corruptions including clarity, responsibility, and trust has had a significant role in reducing administrative corruption. IT, in the form of electronic state, has increased the possibility of finding errors by keeping the details of processed data in the systems with open resources and has provided the possibility of pursuing activities and exploring the corruption due to inappropriate activities. ICT has a significant role in reforming administrative management and by engendering clarity in administrative affairs causes the better access to clearer information and to better services in the least time and costs. Electronic affairs cause the facilitation of state commitments, development of societies, increase in state productivity, the improvement in responsibility, and trust to governments (Amiri and Kianinejad, 2013).

IT can reduce the misuse of the administrative power of the unnecessary interventions of governments by reducing them. It can supervise the behaviors of the staff with little costs and by increasing mutual interactions between the individuals create social capital and by the process of providing services to people, causes the prevention of corruptive behaviors of the administrative staff. Further, IT can prevent the corruptive behaviors by reducing systematically the intentional behaviors of the staff. Researchers have concluded that electronic states along with electronic participation have more potential to attain success. Researches indicate that a lot of governments, via IT, have been successful in increasing clarity, the improvements in responsibility to the public and attracting the trust of more people to governments (ibid).

2.2. Personal development

Human forces as the users and appliers of factors of production as well as the starting points of organizational activities require more considerations because that quality and quantity of human forces in organizations have significant influences on the productivity of organizations. The issue that human forces of each society are the most factors of production, and the growth and development of each country depends on the quality of human forces are the facts known to everyone today. But, nowadays,

the quality of human forces of a country can be transformed by investment in education (Tavakoli and Emadzadeh, 1996). Staff's personal development is a vital and inevitable issue which should consistently be considered with the set of management processes. Personal development, in fact, is one of the principled and logical paths of guiding staff's efforts in organizations and causes the application of latent intelligence, using imaginations, engendering required intellectual flexibility in the staff (Abtahi, 2004).

The human force is considered as one of the most important, expensive and valuable organizational capitals and resources, it is the only sentient element who as the coordinator of other organizational factors has the main role among all factors. One can easily state that without efficient individuals, access to organizational objectives is impossible. Therefore, human resources have basic roles in growth, dynamics and flourishing or defeat and devastation. The importance of this factor as one of the most important factors in operational chain and thought of every organization has been proved and organizations which have had significant successful, have considered human being as the exemplar of their activities (Amir Khani, 2006).

Personal development or professional development is a continuous process regarding evaluating educational needs of each individual and planning for realizing these needs. This process helps individuals to think about knowledge, performance or successes and plan for their personal and educational promotion and achievement. By creating and implementing planning for personal achievement, a situation is created in which each personnel finds opportunity to speak with his superordinate frankly and besides declaring problems, finds out the expectations of the superordinate and at last reaches a conclusion in line with better implementation of services. Further, by implementing this project, we can appropriately determine the domains in which the personnel requires more training and by concentrating on training of the personnel, we can provide the grounds for increasing efficacy and efficiency of trainings.

The plan of personal development is a written scheduled plan for realizing professional needs of individuals in line with their development and growth. In this plan, it is tried that the staff be developed regarding their capabilities and abilities in line with objectives of their organizations and jobs and establishes a kind of dynamic relationship between the requirements of their personal development and professional tasks. Personal development planning as an applied tool causes the development and promotion of knowledge and skills of the staff via active participation of supervisors and managers, which the most important feature of it is mutual interaction of the staff and supervisors (managers) (Nixon, 1994).

"Personal development" is a tool by which supervisors make a relationship between the staff to

compromise on developmental objective and requirements and get familiar with the staff's interests. Personal development causes the growth and promotion of knowledge and skills of the staff through active participation of supervisors and managers; its most important features are mutual interactions of managers and the staff. Personal development planning is a cycle of the planning of the whole organization. As known, strategic planning of organizations concentrates on long-term objectives and practical planning in line with strategic planning of organizations is the guarantee of realizing strategic objectives. Managers and supervisors are burdened with implementing practical plans. Therefore, tasks should be consistent with the priorities specified by the supervisors for doing practical plans and the supervisors should be assured that the staff enjoys sufficient knowledge, skills and abilities for achieving determined objectives. In this line, designing and implementing a personal development plan and evaluating the staff's skills have an important role in doing practical plans of organizations and at last realizing strategic objectives of organizations.

3. Literature review

Islam Panahi et al., (2012), in a research titled as "Investigating the application of IT and its role in increasing organizational productivity" conducted among the staff and managers of Medical Services Insurance Organization in Fars Province, concluded that the application of IT results in better responsibility to customers. The findings of the research indicate the staff and managers of Insurance organization in Fars Province believe that the application of IT results in increasing red rope and more satisfaction of customers. In addition, from the findings of the present study, it can be concluded that the staff and managers of Medical Services Insurance Organization of Fars Province can cause the development and optimization of organizational operation by applying IT.

Ghotbi et al., (2012), in a research titled as "investigating the role of ICT in improving organizational performance in libraries of state universities in Isfahan (CBS) using score cards Menva" concluded that analyzing the data based on the demographic characteristics indicated that there is no significant difference between libertarians in terms of position, education, and years of service; but people having a degree in librarianship believed in the role of ICT in the improvement of organizational performance of the libraries of universities more than those not having the degree. The findings of the research indicate that the most role of ICT is related to the internal processes and the least role is related to the increase of its growth and learning.

Movahhedi et al., (2011), in a research titled as "the study of the role of ICT in the performance of MCI" concluded that ICT is effective on the factors of

performance including low-cost leadership and distinguishing.

According to Nile (2003), IT can be effective on productivity only through innovation in processes of business. In other words, IT without innovation in business processes cannot have much influence on increasing productivity.

Lee et al., (2010) presented a model in which IT by influencing processes, causes increasing decentralization and integration and in turn improvement of business performance.

Aristovnik (2012) in a research investigated the effect of ICT on educational performance among the countries of Southwestern Asia and Scandinavian countries and concluded that there is a significant difference between the studied countries in terms of application of ICT to educational performance and Finland, Norway and South Korea have more efficacy in ICT. At last, he indicated that the studied countries have the potential in the performance and efficacy of IT and improvement of performance and educational consequences.

Tarutė and Gatautis (2014) investigated the effect of ICT on the performance of small and medium companies and concluded that ICT improves internal and external communication of companies and consequently improves staff's performance.

4. Research questions

Regarding the role and importance of ICT in organizational development an improvement and due to the importance of ICT for organizational staff, the present study is to identify and rank the effect of apply ICT on planning the personal development of the staff working in Electricity Distribution Company of Chaharmahal and Bakhtiari Province in 2014. Doubtlessly, investigating such issues can be suitable for enriching literature of researches on ICT.

The present study is to answer the following questions:

1. To what extent is applying ICT effective on each dimensions of the employee's personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) Electricity Distribution Company of Chaharmahal and Bakhtiari Province?
2. How is the ranking of the effect of applying ICT on each dimensions of the employee's personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) Electricity Distribution Company of Chaharmahal and Bakhtiari Province?
3. Is there any significant difference between demographic variables (age, gender, education, and years of service) and the effect of ICT on personal development in Electricity Distribution Company of Chaharmahal and Bakhtiari Province?

5. Population, sample size and sampling method

The population of the study includes all the staff working in in Electricity Distribution Company of Chaharmahal and Bakhtiari Province who was 453 individuals. In the present study, to predict the sample size, stratified random sampling proportionate to population size was employed. In addition, due to having a 453 individual population, 208 participants were selected using the mentioned sampling method.

6. Research instrument

The instrument used in the present study is a 25 item researcher made questionnaire including five aspects consisting of the effect of applying ICT on the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks. This questionnaire was designed based on

five-point Likert scale and scored from 1 means strongly disagree to 5 strongly agree. To analyze the data, descriptive and inferential statistics (one sample t-test, Friedman's test, independent t-test and ANOVA) were used.

7. Research findings

In this section, based on the collected data, the research questions are investigated. T-test was used for analyzing the data.

First question: To what extent is applying ICT effective on each dimensions of the employee's personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) Electricity Distribution Company of Chaharmahal and Bakhtiari Province?

To investigate the first research question, one sample t-test was used. The results are presented in Table 1.

Table 1: comparing the mean scores of the effect of applying ICT on the staff working in in Electricity Distribution Company of Chaharmahal and Bakhtiari Province with the hypothetical mean 3

Components	Mean	SD	t	df	P
The reflection of thoughts and ideas of the staff	3.32	0.72	6.48	207	0.001
Registering thoughts, ideas and experiences	3.85	0.44	27.71	207	0.001
Planning	3.73	0.41	25.34	207	0.001
Implementing	3.94	0.49	27.50	207	0.001
Evaluating	3.67	0.53	18.14	207	0.001

According the findings of Table 1, the mean scores of the effect of applying ICT on each of dimensions of personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) of personal development of the staff working in in Electricity Distribution Company of Chaharmahal and Bakhtiari Province are 3.32, 3.85, 3.73, 3.94, and 3.67 respectively. The observed t is bigger than the table t; therefore, the score of the effect of applying ICT on the staff's personal development is bigger

than the moderate level and it is statistically significant

Second question: How is the ranking of the effect of applying ICT on each dimensions of the employee's personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) Electricity Distribution Company of Chaharmahal and Bakhtiari Province?

To investigate the second research question, Friedman's test was used. The results are presented in Table 2.

Table 2: ranking the effect of applying ICT on each of the dimensions of the staff's personal development using Friedman's test

Variables	Mean	Ranks in the group
Implementing tasks	3.77	1
registering thoughts, ideas and experiences	3.23	2
Evaluating tasks	2.93	3
Planning tasks	2.84	4
the reflection of thoughts and ideas of the staff	2.22	5

According to the above table, the priority of the effects is as follows respectively:

- Implementing tasks
- Registering thoughts, ideas and experiences
- Evaluating tasks
- Planning tasks
- The reflection of thoughts and ideas of the staff

Third question: There is a significant difference between demographic variables (age, gender, education, and years of service) and the effect of ICT

on personal development in Electricity Distribution Company of Chaharmahal and Bakhtiari Province.

The results of independent t-test and ANOVA in using ICT based on gender, age, education, and years of service are presented in Table 3.

As observed, in Table 4, t-observed at the level $p < 0.05$, is only different in registering thoughts, ideas and experiences ($p = 0.001$ and $t = 4.12$); therefore, in registering thoughts, ideas and

experiences, the mean score of the men are higher than women.

Table 3: comparing the mean scores of personal development based on gender

Variable	Women		Men		t	p
	Mean	sd	Mean	sd		
The reflection of thoughts and ideas of the staff	3.29	0.60	3.34	0.79	0.49	0.62
Registering thoughts, ideas and experiences	3.69	0.41	3.94	0.43	4.12	0.001
Planning	3.66	0.32	3.76	0.45	1.65	0.09
Implementing	3.93	0.52	3.95	0.48	0.16	0.78
Evaluating	3.71	0.53	3.65	0.54	-0.76	0.44

As observed in Table 4, F-observed at the level $p < 0.05$, in the reflection of thoughts and ideas of the staff ($p = 0.04$ and $f = 2.79$), planning tasks ($p = 0.001$ and $f = 5.97$), implementing tasks ($p = 0.001$ and $f = 10.97$) and evaluating tasks ($p = 0.001$ and $f = 3.21$) there is significant differences. It means that the mean score of the reflection of thoughts and ideas of the age group 51-60 years old, in planning the age group below 30 years old, in implementing the age group 41-50 years old and in evaluating the age group below 30 years old and 31-40 years old are higher than other groups.

As observed in Table 5, F-observed at the level $p < 0.05$, in the reflection of thoughts and ideas of the staff ($p = 0.04$ and $f = 6.37$), planning tasks ($p = 0.001$ and $f = 6.88$), implementing tasks ($p = 0.001$ and $f = 11.12$) and evaluating tasks ($p = 0.001$ and $f = 3.28$) there is significant differences. It means that the reflection of thoughts and ideas, the mean scores of the staff holding MA, and in registering thoughts, ideas and experiences, in planning, and in implementing the mean scores of those holding diploma are higher than other groups.

As observed in Table 6, F-observed at the level $p < 0.05$, in the reflection of thoughts and ideas of the staff ($p = 0.04$ and $f = 11.77$), planning tasks ($p = 0.04$ and $f = 4.23$), implementing tasks ($p = 0.001$ and $f = 7.13$) and evaluating tasks ($p = 0.08$ and $f = 4.65$) there is significant differences. It means that the reflection of thoughts and ideas, and in planning tasks, the mean scores of the staff with 10 to 20 years of service and in implementing, the mean score of those with less than 5 years of service are higher than other groups.

7. Discussion and conclusion

The results of the present study indicate that the mean score of the effect of ICT on each dimensions of personal development (the reflection of thoughts and ideas of the staff; registering thoughts, ideas and experiences; planning tasks; implementing tasks; and evaluating tasks) of personal development of the staff working in in Electricity Distribution Company of Chaharmahal and Bakhtiari Province are 3.32, 3.85, 3.73, 3.94, and 3.67 respectively. The observed t is bigger than the table t; therefore, the score of the effect of applying ICT on the staff's personal development is bigger than the moderate level and it is statistically significant.

As the results of the present study indicate, because the value of the significance level is less than 0.05, it can be said that the null hypothesis is rejected and the research hypothesis is confirmed; in fact, the effect of applying ICT on the staff's personal development is bigger than the moderate level and it is statistically significant at the significance level 95%. Accordingly, it can be concluded that the level of the effect of applying ICT on each of the dimensions of the personal development of the staff working in in Electricity Distribution Company of Chaharmahal and Bakhtiari Province is higher than the moderate level and it is at a desirable level. The findings of the present study is consistent with those of Hassanzadeh (2005), Gholipour (2011), Aghapour (2012) and Bani Najjarian et al. (2013). It means that when the employees of the organization uses ICT, they feel that they can identify their unrealized needs and use the registered reports and documentations, and also contribute to registering and illustrating documents regarding plans in which they participated. IT can help to register and keep agendas and regulations of the staff. The findings of the present study indicate that the use of IT increase the degree of utilization of an integrated database for facilitating information transferring and due to implementing this technology in the organization, the enthusiasm to develop new method and models has been created among the employees more or less. In fact, this modern technology can engender conditions in the organizations in order that communications can be facilitated and ideas can be circulated in the organizations. In addition, the management receives this information seriously and investigate it. This issue can be possible via the management system of job ideas. Further, using IT, the wall of registering ideas and thoughts can be run systematically by the used of IT in order that everyone can register each idea comes to his or her mind.

When the organization utilizes IT tangibly, the employees feel that by using IT they can present their needs and ideas and determine their objectives better. In addition, they can identify what activities they can do to attain their objectives. They imagine that by using IT modern method of tasks are changed in organizations. Declaring ideas and thoughts have threats and risks with it, some employees may humiliate the presenter of some ideas, or those who are not interested in changes may oppose those who

have declared their ideas. But, by new technologies in a more desirable way. and IT, declaring ideas has been possible for the staff

Table 4: comparing the mean scores of personal development based on age

	Below 30 years old		31 to 40 years		41 to 50 years old		51 to 60 years old		f	p
	Mean	sd	Mean	sd	Mean	sd	Mean	sd		
The reflection of thoughts and ideas of the staff	3.43	0.62	3.20	0.76	3.44	0.71	3.75	0.001	2.79	0.04
Registering thoughts, ideas and experiences	3.99	0.52	3.80	0.42	3.87	0.45	3.83	0.001	2.52	0.21
Planning	3.76	0.50	3.76	0.40	3.74	0.35	3.14	0.001	5.97	0.001
Implementing	4.03	0.54	3.87	0.48	4.12	0.39	3.20	0.001	10.97	0.001
Evaluating	3.75	0.80	3.75	0.45	3.55	0.51	3.33	0.001	3.21	0.02

The employees, using IT, can use the feedbacks amended by the system and think that without the Internet the ability to use standard electronic services will be reduced without considering the place where they are present. On the other hand, due to applying ICT, auxiliary and peripheral functions of

friends and colleagues increase and applying the principles of new planning cause the increase in using IT. In addition, the degree of using IT is significantly effective in coordinating personal planning.

Table 5: comparing the mean scores of personal development based on education

	Diploma		Associate diploma		BA/BSc		MA/MSc		f	p
	Mean	sd	Mean	sd	Mean	sd	Mean	sd		
The reflection of thoughts and ideas of the staff	2.92	0.80	3.44	0.72	3.44	0.41	3.50	0.001	6.37	0.001
Registering thoughts, ideas and experiences	4.01	0.51	3.87	0.40	3.62	0.38	3.33	0.001	6.88	0.001
Planning	4	0.35	3.69	0.40	3.51	0.39	3.71	0.001	11.12	0.001
Implementing	3.96	0.56	4	0.47	3.70	0.41	3.80	0.001	3.28	0.02
Evaluating	3.65	0.55	3.71	0.54	3.59	0.51	3.33	0.001	0.91	0.43

In organizations which ICT is dominant, the issue of the staff's personal development has been changed, performance of each organization depends on the performance of human resources of that organization and their interaction with the resources, facilities and technologies available in the

organization. In addition, the performance of the human resources depends on their ability and capabilities. The capability of human resource in turn depends of professional skills and knowledge in doing tasks.

Table 6: comparing the mean scores of personal development based on years of services

	Below 5 years		5 to 10 years		10 to 20 years		More than 20 years		f	p
	Mean	sd	Mean	sd	Mean	sd	Mean	sd		
The reflection of thoughts and ideas of the staff	2.98	0.65	3.16	0.62	3.69	0.82	3.58	0.44	11.77	0.001
Registering thoughts, ideas and experiences	3.70	0.40	3.86	0.42	3.99	0.50	3.73	0.28	4.23	0.006
Planning	3.52	0.52	3.74	0.25	3.89	0.41	3.66	0.53	7.13	0.001
Implementing	3.91	0.49	3.87	0.46	4.13	0.44	3.78	0.59	4.65	0.004
Evaluating	3.54	0.58	3.65	0.42	3.71	0.61	3.88	0.56	2.22	0.08

IT along with its factors has caused a lot of transformations and changes in companies and business organizations in such a way that the total performance of these companies is totally influenced by the application of discussed technologies. In this arena, human resource management, due to its

expansive role in organizations, is influenced by these changes.

Growth and development of ICT cause cheaper and easier sorting, retrieving and distributing valuable information so that we have not to create them again. ICT has two advantages for every organization. First is that their organizations and

managers enable them to access the data as easily as possible and this factor causes more support of the process of decision making. Secondly, by utilizing ICT, organizations are enabled to in a competitive space, act more desirably and consider their qualitative decision makings and efficacy (Hedelin and Allwood, 2002).

The employees, using IT, can use the feedbacks amended by the system and think that without the Internet the ability to use standard electronic services will be reduced without considering the place where they are present. On the other hand, due to applying ICT, auxiliary and peripheral functions of friends and colleagues increase and applying the principles of new planning cause the increase in using IT. In addition, the degree of using IT is significantly effective in coordinating personal planning.

7.1. Applied suggestions

- It is suggested to managers and supervisors that:
- They should consider tasks and standards of doing tasks, job accounts, knowledge of skills and necessary ability to do an appropriate performance with the approach of applying new technologies. It means that they should consider the needs of the organization in future years regarding the strategic plans of changes in technology of hiring employees. Further, they should identify the potentials of realizing needs after need assessment in order that the staff can have the motivation and ability to develop and reflect their ideas and thoughts.
 - They use IT in issues related to hiring human resources such as employment, selection, training and systems of compensating service and evaluating staff's performance.
 - They should identify the needs of the staff's development by comparing skills and abilities with job needs.
 - They should identify the opportunities of job paths and selection of the best alternative for each person.
 - They should provide educational software systems.
 - They should provide information and training for the users of credit cards.
 - They should regulate personal development plans.
 - They should create enthusiasm in the staff for developing their knowledge and skills outside the requirements or official training presented by organizations and learning IT.
 - They should discuss with the staff about the objectives of development: the role of supervisors and managers in the process of developing personal development is as a "tutor and guider". Managers and supervisors should provide the facilities and equipment (new technologies) for increasing knowledge and skills as well as

developing different aspects of the staff to access development objectives.

- They should create visual technology due to the fact that using these technologies, individuals can concurrently communicate visually with each other while they are outside the organization.
- Implementing a personal and professional development system for each of the staff.
- They should do measures regarding investigating and evaluating the best strategies of efficacy of ICT in personal development in small and medium firms and prioritize them. In addition, it is suggested to the researchers that small and medium industries should be divided in terms of fields and activity types and investigate the role of ICT in staff's personal development in each of these industries. After that, the results of different industries should be compared with each other.

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