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PRESENTATION OF A MANAGEMENT MODEL FOR EDUCATION INSTITUTES' SOCIAL NETWORKS

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ABSTRACT

The current study aims at presenting a managerial model for the social network of education institutes. Research population consists of master specialists in Education Ministry in 1393 (2014). Research sample has been chosen by random sampling method. Using Cochran method, sample size has been determined as 205. Research method is explorative with respect to research aim, correlational (non-experimental casual) regarding research execution, temporal in terms of time spent for research execution and descriptive-applied regarding findings. To collect data, researcher-made questionnaires consisting of 67 questions have been made use of. To determine the validity of the questionnaire, after performing t-test, based on the opinions of the professors of Tehran, Tabriz and Khoy universities, correlation coefficient has been confirmed. To determine the reliability of the questionnaires, factor analysis has been used through main elements. The results indicate the reliability of the questionnaire. The questionnaire's validity has been confirmed through Cronbach's Alpha (α=0.854). To analyze data, referential and descriptive statistical methods have been used. To describe data, such methods of descriptive statistics as frequency table, measures of central tendency (mean), measures of distribution (standard deviation), data skewedness and data maximum and minimum have been used. Also, to determine the validity and reliability of data measurement tools, Pearson correlation coefficient, independent t-test, factor analysis and Cronbach's alpha have been employed. The most important statistical method used in the present study for testing hypotheses is "Structural Equations Modeling" carried out by

maximum likelihood and through using AMOS software. Findings indicate that the final model effects on learning with coefficient 0.87, on social network with coefficient 0.85 and management with coefficient 0.40. Those coefficients are significant with confidence level of $P < 0.001$. Also, fit indexes of the model reveal that all indexes are in proper domain. Therefore, given research method is fitted with empirical model of the research and research method has been confirmed.

Keywords: Management, Social Network, Learning, Integrated Space, Educational Processes

INTRODUCTION

Computer invention and the emergence of new information technologies have greatly affected education domain like other human activity fields. The perspective of the education domain could be easily seen in the hand of the technology in the third millennium (Novruzi, et al., 2008).

The concept of "literacy" has changed these days. And, in assessing the development rates of societies, digital literacy and the enjoyment form its elements have grabbed the attention of management and planning top bananas. Gutenberg generation had passed and new generation, referred as “digital folk”, has been currently forming. Those are the youth grown using digital technologies including computers and smart phones and lost their inclination toward books and journals (Bakhshipoor, 2012).

Despite many usages of ICT, the issue mostly talked about today is that real physical interactions have reduced thanks to online interactions. As a result, it results in more but weaker social interactions (Khazaee, 2012).

Social network theory is different from sociological theory defining society as consisting of people. In social network theory, there are links and relations among “nodes” existing in that network.

Cyber social networks, as societies, result from interactions among friends and people having similar thoughts and enjoy “openness” and “decentralization”, meaning that any damage in any element or any node in the network does not devastate it. Cyber social networks do always reconstruct and rehabilitate themselves.

In such networks, in addition to internal network interactions, it is common to interact externally. Such interactions not only create “social property” and “power”, but also play key role in forming social waves and affecting on real environment facts (Babaei & Khaniki, 2011).

This network augments digital literacy among society. It should be handled through an efficient and dynamic

management model. While satisfying the needs of Education Ministry and its subsidiary organizations in real and virtual spaces, this model should keep pace with ICT changes and make use of those changes in favor of accelerating services.

Traditional education has been gradually superseded by web virtual space. Organization, control and management of educational processes have been difficult. In addition to the accountability to educational demands of learners and parents expectations, blended learning model empowers school principals in using new information technologies.

Today, it is necessary to teach and learn electronically. This could fill the gaps of formal education services in areas in which it is not possible to deliver education physically and play a key role in reinforcing and making education services complete in public education, high education, higher education and in-service trainings (Moheb Ali, et al., 2013).

The main problem stated in the current paper is how managers in the realm of education control the human network forming their formal an informal of their institute's organization in order to facilitate teaching-learning process and other educational missions. The vast network of human resources playing role in the field of education tasks and goals is widespread in the space of real societies. Many of those elements are active in virtual space and they may be unaware that their colleagues are active in the space. Benefits in the exploitation of virtual space capacities based on ICT elements encourage the potential linking role players in the realm of education and forming great education networks in the virtual world. Many of those links and bridges of institutes' social networks play a significant and strategic role in decision making and forming education goals and improving learning procedures. For education institutes' heads, the graphic recognition of their institutes' social network relations will be vital. For the understanding and the possibility of change in network organization and the transition of effective message, an advance management model is necessary.

Although postmodern management theories pay serious attention to the rapid changes of current knowledge world, the management and leadership of the social networks of institutes lack a comprehensive and complete model either in real world or virtual one. The current research attempts at finding the management model of institutes' social networks.

The elements of social networks, the elements of education social network, the infrastructures of social networks, the management elements of institutes' social networks, digital literacy, the links among nodes (human resources forming human

resources are among the variables of the current research.

The current paper attempts at presenting a management model for institutes' social networks using the theories of several specialist fields of human knowledge. The model of current research takes a fundamental step in the establishment of the document of change in Iranian education realm.

To achieve the general goal of the present study, following special goals will be considered:

1. Identifying the main elements of institutes' social networks
2. Specifying the human elements forming institutes' social networks
3. Specifying the technological and technical elements forming institutes' social networks
4. Specifying the legal elements forming institutes' social networks
5. Specifying the cultural elements forming institutes' social networks
6. Specifying the economic elements forming institutes' social networks
7. Identifying learning elements in institutes' social networks
8. Identifying management elements in institutes' social networks

Research Questions

1. What are the main elements of social networks in the management of institutes' social networks?
2. What are human elements of institutes' social networks?
3. What are technological and technical elements of institutes' social networks?
4. What are legal elements of institutes' social networks?
5. What are cultural elements of institutes' social networks?
6. What are economic elements of institutes' social networks?
7. What are learning elements in the management of institutes' social networks?
8. What are management elements in institutes' social networks?

Also, the general model of the current research in which institutes' networks comprise of three fields of social network, learning and management which is fitted with research main findings is tested.

RESEARCH METHOD

Research method is explorative with respect to research aim, correlational (non-experimental casual) regarding research execution, temporal in terms of time spent for research execution and descriptive-applied regarding findings. The main approach of the research is quantitative. Of course, qualitative approach has suitably exploited.

Research population consists of 480 specialists working in the Ministry of Education and having master's degree or

higher in education management and educational sciences, computer sciences, information technology and other related fields. Through random sampling and using Cochran method, 205 respondents have been chosen from among the research population.

Final questionnaire consists of 67 items in the form of 10-degree Lickert scale in that maximum score for each item is 10 and minimum is 1. The number of questions have been allocated in terms of institutes' social network fields in such a manner that 30 questions have been attributed to social network field, 16 to learning field, 22 to management fields. Scoring procedure in the questionnaire is in the way that specific scores for any field are calculated by sum of scores for indexes and elements.

In the current research, to determine the reliability of the questionnaires, initially, specialists' questionnaires have been prepared and distributed among 21 faculty members of Tabriz and Tehran universities in management, educational sciences, computer sciences and information technology fields.

After collecting filled questionnaires, answers have been entered in SPSS. Firstly, the Cronbach's alpha has been calculated for 69 questions of the questionnaires. Alpha is 0.714. The result is not able to show the required reliability for the questionnaires. Therefore, to augment the reliability, the correlation coefficient of the questions has been calculated through using SPSS. Question 1 has significant correlation with some of other question in the level of 0.99. As a result, this question is omitted and the Cronbach's alpha is again performed for the calculation of the reliability. Findings are as follows (Table 1):

The validity of the current questionnaires has been investigated in terms of content and construct. To assess content validity of the questionnaires, double and parallel methods are used. To do so, research sample of the specialists is divided into two homogenous groups of Tabriz and Tehran and both groups are compared through t-test. Findings indicate that there is significant difference among opinions of two groups in question 17($P<0.05$). So, that question is omitted. Ultimately, using SPSS, the correlation coefficient of questions of both groups is calculated and validity of questions has been confirmed due to high correlation ($r = 0.78$). The Cronbach's alpha is 0.851 after omitting question 17. After collecting data, Cronbach alpha is again calculated for the data. Findings are shown in the following table in terms of social network, learning and management fields together with questionnaires' total reliability (Table 2).

To determine the Questionnaires' Construct Validity

Before performing factor analysis through main factors, to investigate sampling adequacy, Kaiser –Meyer-Olkin measure of sampling adequacy index (KMO) is used and to assess the significance of correlation matrix which is the base of factor analysis, Bartlett's test of sphericity is employed. KMO index is 0.811 and Bartlett's test result is significant as 19811.90 with freedom degree of 2211 in level of 0.001. According to calculations, it could be concluded that sample and correlation matrix are proper for analysis and the adequacy of the model is confirmed (table 3).

Table 3 shows values of common factor loads among extracted factors and investigated variables. Values under 0.30 of this variable usually specify variables candidate for omission. In other words, those variables shake the bottom of the adequacy of the model.

Table 1: Reliability of questionnaire

Number of Questions	Cronbach's Alpha
68	0.854

Table 2: Cronbach's alpha for questions in terms of main fields of the research

Reliability	No of Questions	Cronbach's Alpha
Social Network	30	0.802
Learning	16	0.868
Management	*22*	0.842
Total Questionnaire	67	0.876

Table 3: KMO and Bartlett's Test of Sphericity Results for Current Research's Questionnaires

KMO Index	0.854	
Bartlett's Test of Sphericity	Chi Square (χ^2)	9242.725
	Degree of Freedom	2080
	Significance Level	0.001

RESEARCH FINDINGS

The most important findings are presented with respect to the order of research questions.

Question1: What are the main elements of social networks in the management of institutes' social networks?

Widespread studies have been carries out in order to find social network factors in the resources related to computer sciences and information technology fields. In extracting more factors, researchers pay attention to resources and factors relevant to teaching, learning, management, knowledge management virtual systems and similar items. To present examinable categorization, dimensions forming social networks have been identified. Those dimensions are respectively extracted as technical-technological, human, managerial, legal, economic and cultural.

Statistical tests indicate that coefficients of all elements have significant impact coefficient with social network construct.

Meanwhile, cultural element with 0.87, human element with 0.81 have highest impact coefficient with social network construct and economic element with coefficient of 0.72, technical-technological element 0.68 and legal 0.62 are in the next ranks.

Also, Findings from statistical tests reveal that the coefficients between social networks construct and its elements are significant in the level of $P < 0.001$ in all dimensions.

Furthermore, regarding the output of AMOS, chi square is 5.96, which is not significant in the level of 0.05. In structural equations modeling, insignificant chi square means model fit. Therefore, one could say that the research's conceptual model is fully fitted with data. Also, the proportion of chi square to degree of freedom, that is, x^2/df is 1.49 whose value under 5 shows model's proper fit. Furthermore, RMSEA should be under 0.8 which is 0.049 in the presented model. The value of GFI, AGFI, CFI and NFI should be over 0.9 which all fit indexes are higher than 0.95 in the investigated model and shows excellent fit of data with the conceptual model. Therefore, research data are excellently fitted with factor structure of the social network model.

Question 2: What are human elements of institutes' social networks?

In the current research, human dimension elements have an important role in social network construct with impact coefficient of 0.81. It seems that it is the case in real world too because the base and kernel of any kind of social network in human societies is communication and links of people who connect together and interact within that network based on environmental conditions.

Data analysis shows that information society element has highest impact on social network with coefficient of 0.78. Population elements with coefficient of 0.41 and digital literacy with coefficient of 0.38 are in the next ranks. All elements of human dimension are significant with significant level of 0.021 in confidence level of $P < 0.05$.

Question 3: What are technological and technical elements of institutes' social networks?

Technological and technical elements mostly deal with the infrastructures of social networks and are investigated in technology and computer fields. However, some of those elements are considered in the current research: the elements have general aspect and statistical sample enjoy common understanding in response to them. For so doing, from initial research project, "frequency management" which is subject to the issuance of exploitation permits and the usage of white (empty) space by secondary operators and "network impact coefficient" which is the proportion

of the number of internal links (receptive) to the total number of resources receiving links have been omitted.

According to the findings, technical-technological construct has impact coefficient of 0.75 with digital opportunity element and impact coefficient of 0.63 with wide band element and both coefficients are significant in the level of 0.001. In dividing each one of the above-mentioned elements into forming indexes, some notable points are worthy to mention. Technical-technological dimension has the highest impact with hierarchical allocation index of wide band dimension with coefficient of 0.79 and the lowest with the opportunity index of digital opportunity dimension with coefficient of 0.08. The impact coefficients of other indexes are respectively as following: high capacity, 0.65; usage/application, 0.64; always on, 0.28; and infrastructure, 0.21.

Regarding that the value of GFI, AGFI, CFI and NFI should be over 0.9, all fit indexes are higher than 0.95 in the investigated model and shows excellent fit of data with the conceptual model. Therefore, research data are excellently fitted with factor structure of the technical-technological model.

Question 4: What are legal elements of institutes' social networks?

Findings from data analysis reveal that legal construct has the highest impact with item number 25, that is, time period of fixing breakdowns and the lowest with item number 27, that is, security information deliverance to users. Remaining indexes are respectively as following: network security facilities with coefficient of 0.64, system security update with coefficient of 0.57, time period of threats control with coefficients of 0.48 and anti-virus software installation with coefficient of 0.42.

From among above-mentioned indexes, the impact coefficient of security information deliverance to users is significant with confidence level of 0.01 and remaining indexes with 0.001.

Meanwhile, regarding that the value of GFI, AGFI, CFI and NFI should be over 0.9, all fit indexes are higher than 0.90 in the investigated model and shows excellent fit of data with the conceptual model. Therefore, research data are excellently fitted with factor structure of the legal model.

Considering network security, numerous studies have been carried out and all of them have emphasized on its importance and necessity in all networks, including Dos, 2012; Khazaee, 2012; Khaleghi, 2013. Findings of the current research correspond with findings of the above-mentioned studies.

However, findings of Mary Madams (2012) are against ones from the current research because she concluded that half of

users of social networks had reported some of their problems in the profiles with respect to privacy control and users enjoying high educational levels had been in higher levels of peril.

Question 5: What are cultural elements of institutes' social networks?

In the current research, cultural dimension has been investigated through three elements: electronic content archive, link to information databases and content localization.

Findings show high impact coefficient for all three elements as following respectively: link to information databases with coefficient of 0.77, content localization 0.72 and digital content archive 0.7.

As predicted based on impact coefficients, the investigation of coefficients among elements of cultural dimension of social network shows that those elements are significant with confidence level of $P < 0.001$.

Question 6: What are economic elements of institutes' social networks?

Among several elements of economic dimension, investment element referring to the economics of social networks has been investigated. This element has three indexes of budget, benefit/loss balance and income resources.

Standard coefficients of the model show that economic construct has the highest impact on network benefit/loss balance preparation and the lowest on income resources. Prediction of network operation budget with coefficient of 0.60 is in the middle of above-mentioned indexes.

Question 7: What are learning elements in the management of institutes' social networks?

From research literature, and classic and postmodern theories on learning, it could be said that human learning shapes in three spaces: real (natural environment of birth, growth, study, work and so on), virtual (web, electronic content and information technologies) and integrated space (the result of interaction between real and virtual worlds).

Impact coefficients resulted from research data analysis reveal that learning construct has the highest impact on electronic learning (virtual learning) with coefficient of 0.97 and the lowest on real learning with coefficient of 0.66. Integrated space with coefficient of 0.71 is in the middle of both.

The impact coefficients of those three elements are significant with confidence level of $P < 0.001$. Therefore, learning elements are well fitted with current research's managerial model of institutes' social network.

Question 8: What are management elements in institutes' social networks?

Managerial elements of institutes' social network have been extracted from postmodern management theories.

After much justification and opinion poll with specialists of management science and in order to observe briefness and considering respondents spent time, managerial dimensions of institutes' social networks have been tested.

Research data analysis in management field indicates that management construct influences on organizational structure with coefficient of 0.86, institutes' social network processes with 0.39 and knowledge management with 0.39. All coefficients are significant with confidence level of $P < 0.001$. Therefore, managerial elements are fitted with institutes' social network model in the current research.

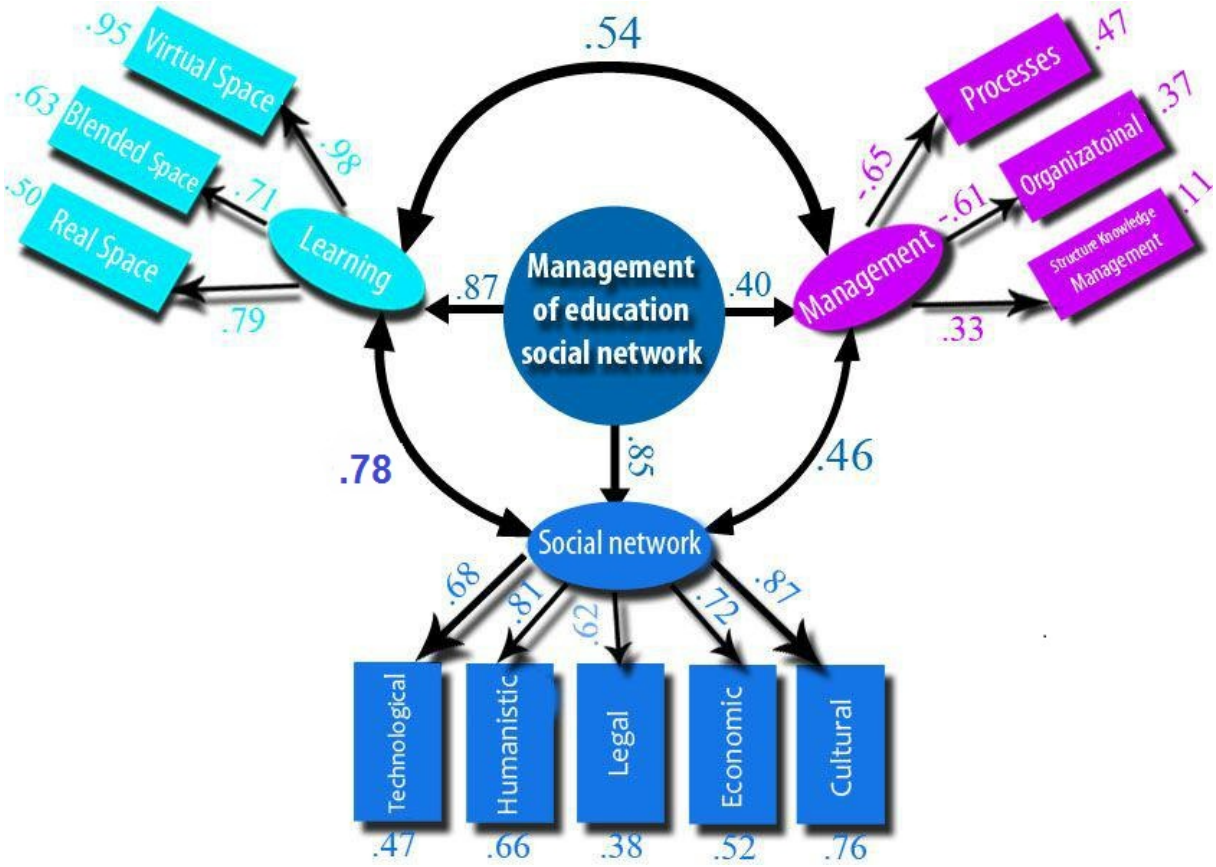

Diagram 1: Model of Management Construct Elements

Research Main Question: Is general model of the research where institutes' network consists if social network, learning field and management field fitted with empirical data?

To answer this question, all tested elements in three fields of social network, learning and management are categorized. Findings from statistical analysis reveal that managerial model of institutes' social network influences on learning with coefficient of 0.87, social network with 0.85 and management with 0.40. All of

those coefficients are significant with confidence level of $P < 0.001$.

Also, the impact coefficient of social network on learning is 0.78, of learning on management is 0.54 and of social network on management is 0.46. All of those coefficients are significant with confidence level of $P < 0.001$.

Except for adjusted goodness of fit index (AGFI), the amount of goodness of fit index (GFI), comparative fit index (CFI) and Normalized fit index (NFI) are over 0.90 in the investigated model. Therefore, research data are properly fitted with general structure of the research model. The model resulted from research findings is shown as below:

DISCUSSION AND INTERPRETATION

The current research has done in three fields: social networks, learning and management. The study is directed toward education. And, in social network field, it moved mostly toward application of new technologies in education, educational procedures, network management and successful foreign and domestic cases.

The current research has carried out through sociological-educational management so that it could draw what is known as educational social network consisting of students, teachers, parents, education specialists in an integrated space of institutes' social networks.

For so doing, the elements of institutes' social networks grabbed the attention of researchers in a widespread scale.

After adjusting elements and performing validity and reliability tests, research questionnaires have been prepared so that it could gather comprehensive research sample through common understanding.

As mentioned in descriptive indexes if research variables, all skewedness indexes of research variables are in -1 and +1 domain, meaning that data distribution is normal.

Then, data analysis through structural equations modeling shows notable findings:

- In social network, all of its dimensions and elements are significant with confidence level of $P < 0.01$. The correlation coefficient of variables is higher than 0.80, showing that those two variables measure one thing in fact and to locate both of them in one model is problematic.

However, it is worthy to note that correlation coefficient is 0.295 between the elements of cultural dimension and technical-technological dimension and it is the lowest one among coefficients. Although this coefficient is significant, it shows the challenges among technology and culture in large scale and among specialists and it is also reflected in the current research.

Findings of the current research is in parallel with ones from researches done by the wide band commission of International Telecommunication Union and United Nations Conference on Trade and Development (2005), Rodriguez Gairn (1997), ETS (2007), Yoneji Masuda (1990), Pietoso (2013) Elizabeth Koh and John Lim (2012), Teimuri and Kazemi (2013), group of authors (2011), Roshan (2011), Saeedabadi (2008). However, our findings are in conflict with ones of Nurayinejad (2008) and International Telecommunication Union (2007). Seemingly, the conflict of those findings relates to research population and research methods because those studies have been carried out in technical and engineering environments and the current research has done in educational environment.

- In learning field, the elements of learning dimension are significant with confidence level of $P < 0.01$. In this field, the correlation coefficient of integrated learning and electronic learning (virtual learning) is 0.795 near to 0.80.

It seems that there is some overlap among some elements of integrated learning and electronic learning. Of course, those findings match with what happens practically. In other words, the most part of integrated learning capacity is filled with technological infrastructures and managerial and educational processes of this kind of education are done through using information and communication technologies.

However, one should not consider common aspects of those two dimension of learning similar because there such processes as emotions and feelings exchange, not occurring except in real or integrated spaces.

Findings of the present research confirm findings of Labus, et al., 2012; Rinco and Thunderwall, 2014; Guy, 2012; Hariri and Anbari, 2011; Guan, 2012; Saeedipour and Safari, 2012; Guez-Tejdo, et al., 2012; Siemens, 2009; Nowruzi, et al., 2012; Roberts, 2005; and Kaffash, 2011 in integrated learning elements and Nasirzadeh, 2013; Gholamhosseini, 2008; Barzgar, et al., 2012; Mirzabeigi, et al., 2009; Moheb Ali, et al., 2013; Gerlich and Westerman, 2011; Panchorast and March, 2011; Saeedipour and Safari, 2012; Hunter, 2012; Shekari and Mazdaee, 2009; Sameni and Kardan, 2010; Gun, 2012; Koh and Lim, 2012; Leb 2012 in electronic learning elements. In the elements of real-world learning, our findings are in line with ones of Olson, et al., 2009; Mirzabeigi, et al., 2009; Ebrahimzadeh, 2014; Merjel, 2011; Seif, 2008; Robert, 2006; Roberts, 2005; and Mohsenian Rad.

However, this research' findings are opposite to Hargadon (2012). It seems that

Hrgadon's research was on famous social networks including Myspace, Facebook and the like and identified the threats of using social networks in the viewpoints of parents. Also, findings of the research done by Gacidi and colleagues (2012) on cyber threats to students from the viewpoint of parents are not in line with our findings. Furthermore, our findings are in line with ones of Guez-Tejdo and colleagues (2012).

In addition, some parts of Zayedeh (2012) findings are in conflict with ours and the other parts are in line with ours. It is the case with the findings of Falstrand and Headland (2012). In their research, those authors pointed to some physical and mental problems of working with information technologies and workplaces as well as some benefits of integrated learning environments.

- In management field, conditions are different because standard coefficients in management model shows negatively significant coefficient between management construct and processes (-0.65) and organizational structure (-0.61). In contrast, there is a positively significant coefficient between management and knowledge management (0.33).

There are notable points in those findings. First point is the general understandings from social networks, meaning that social networks do no to enjoy required organization unity at least like what one could see in real, formal organizations. In other words, based on this belief, there are not specific management system, hierarchies like what is established in other organizations, consignment of authority and the like. Our findings have generally challenged the foundations of management theories.

It seems that social networks should initially be designed and established based on postmodern educational management theories and local management. Then, after reaching to necessary organizational maturity, required research should be done on their management elements.

Our findings confirm findings of Sepehri and Riahi, 1389; Nikukar, et al., 2011; Soleimani, et al., 2013; Malek Akhlagh, et al., 2010; Radmanesh, 2013; Tabatabaeian, et al., 2011; and Alvani, 2009 in knowledge management dimension; Nikukar, et al., 2011, Gholizadeh, 2010 in borderless organizations; Faridvand Nematabad and Mohammadi Amin, 2013; Koh and Lim, 2012; Martucci, 2013 in processes element; and Ramazan and Hasanzadeh, 2009; Razawi, 2013; Taherpour and Jamshidian, 2008; Hamolika and Bijedik, 2009; and Robert, et al., 2005 in organizational structure. However, in services outsourcing element, findings of Danaeifard (2013) are in conflict with ones of the current research.

RESEARCH CONCLUSIONS

Research literature rooted from studies in diverse resources from the different knowledge fields of "social networks", "learning" and "management" together with research findings and applied experiences during data collection and analysis indicate that:

1. To achieve to its idealistic educational goals and train learners who fulfil their missions in the vast realm of media, the future of Iranian education system depends on the adoption of new approach toward high usage if ICT elements. Today, digital literacy is considered as an effective index on the ranking of countries' development. Furthermore, it should be noted that most of the learners in different educational levels are more literate than their instructors with respect to digital literacy.
2. Social networks are situated in the heart of people's daily lives and learners spend most of their time in virtual networks. Therefore, it is necessary for senior management of education system to change their approach toward using virtual space and prepare infrastructures in which it is possible to exchange thoughts and feelings among instructors and learners in a safe space and flourished organizational culture space.
3. Among postmodern management theories, principles of chaos theory, learning organizations, organizational learning, knowledge management and contingent management could support educational managers. It does not mean that present knowledge in the form of those theories is enough in the management of institutes' social networks. Rather, it is necessary to emphasize on innovation and invention of new management models. Most importantly, during lifetime of the network and its path toward organizational maturity, there will be wide range of research works before researchers.
4. The boundaries among learning spaces and their categorization into real and virtual are not clear-cut. Those spaces and their capabilities have their own specificities and each one of them plays its own role in completing educational procedures.
5. IT, generally, and Institutes' social networks, specifically, is per se making changes, removing limitations and creating opportunities. Therefore, its application in the realm of education has special points.
6. Available education tools in social networks and electronic education systems are basically different from traditional education management in

experience sharing and creation of interactive environments. In traditional education environment, educational managers shoulder the responsibility of their institutes' educational needs. Those managers limit their interaction with external world to senior management and parents. However, mangers of social networks think globally and interact with people in the remotest parts of the world if they have connection to the internet. If they shoulder the responsibility of education, education managers of social networks should design new content and form for their educational services proportionate to global criteria.

RECOMMENDATIONS

According to the general model of the research and its ancillary models and the direction of knowledge world, generally, and education, specifically, it is recommended that

1. According to the impact coefficient of 0.38 of human dimension on digital literacy and as this factor refers to knowledge, skills and understanding of users in institutes' social networks, one could propose that social networks course together with its opportunities and threats is included in the curriculum of secondary schools.
2. The proposed model for social network management is established in limited scale and trial mode in some towns having necessary infrastructures.
3. In order to perform what recommended in clause 2, it is required that the necessity of design, establishment and operation of institutes' social networks is enacted in higher levels of decision making in education system of the country including Iranian Cultural Revolution High Council and Iranian Education High Council.
4. Similar information sites, learning systems and social networks should be identified and analysed in the world and the country. It helps prevent from administrative extra working and design "national institutes' social network" proportionate to Iranian cultural and educational system and its infrastructures. This suggestion is alongside with such indexes as archive preparation, communications with information networks and global content preparation of cultural dimension with coefficient higher than 0.70 as well as various knowledge resources and localization of integrated space content.

5. In order to investigate current conditions and specify indexes for the establishment of institutes' social network and start design, implementation, establishment and operation of such a network, it is necessary to create proper correspondence among affiliate governing bodies. Education Ministry as employer, Information Technology Ministry as technical contractor and Sciences and Research Ministry as knowledge management contractor should organize common measures through a consortium.
6. Considering research findings on the components of management of processes, to start decision making on, design, outsourcing, operation and correction of institutes'' social networks, it is necessary that a multilevel organized plan is compiled through specialists working in relevant fields. In the plan, following executive steps should be taken: Strategy specification and goal determination prior to network establishment

6.1. Education as serious need of users in the Institutes' social networks

6.2. Continuous control and supervision

6.3. Network content standardization and operationalization

6.4. Propaganda in social networks

6.5. Other related topics in social network management

6.5.1. Establishment of communications with networks, websites and weblogs

6.5.2. Establishment of Trust among users

6.5.3. Role of tools in social network management

6.5.4. Social network analysis

6.5.5. Hardware needs

7. With reference to the findings from the index of various knowledge resources in an integrated learning space, diversity in learning environments in general formal education process should be prioritized by authorities of education system as a first step of establishing national institutes' social networks. To create networks of learning environments including research canters, culture houses, public libraries, exhibitions, technology and science special museums, entrepreneurship canters, stadiums and other such canters and to exchange ideas with schools effectively through the enrichment of school environment via cooperation of other relative bodies are within this proposal.

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