Design Appropriate Models Based on Intelligent Dimension in Fars Education Organization

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Abstract

The purpose of this study is to determine the dimensions of smart schools in the Fars education system and provide a suitable model. The research method is descriptive survey. The study population consisted of all school principals Fars Province in the academic 2014-2015 and number of them was 1364. The sample volume using Cochran method was 302 people, which was chosen by cluster. In order to achieve the objectives of the study, beginning with a review of literature and research in Iran and world history questionnaire has 4 dimensions (infrastructure, human resources, process of teaching-learning, management) and 12 elements (hardware, software, physical, administrators, teachers, students, parents, curriculum, teaching methods, content, support, evaluation) and consists of 83 items based on LIKERT scale was adjusted. The validity of based on (judicial authorities, supervisors and advisors) and reliability through Cronbach's alpha was calculated 0.98.

After the distribution and questionnaires, data using statistical indicators and the percentage distribution, confirmatory factor analysis and structural equation modeling at 95% with SPSS 21 software and LISREL 8.8 were analyzed. Findings showed that all aspects have been confirmed and significantly ($P<0.05$) are above average. In all cases, the load factor smart component of education indicators are approved. In dimensions of infrastructure, human resources, process of teaching-learning and management factor loadings are 0.88, 0.43, 0.85 and 0.83, respectively. Selected references valid and dimensions of these smart to have a good education with a view to confirming the standard model coefficients derived by fitting indicators to measure structural equation modeling.

Keywords: dimensions, smart, schools

1. Introduction

In the present era of knowledge and technology together, and the route can not be easily achieved either without the other. Terms such as classrooms without walls, smart schools, Virtual University, referring to a new type of e-learning is perhaps unusual, as opposed to traditional education and regular education system today, instead of different countries. (Niazazari et al., 2010)

Over the past decade the use of information technology in developing countries leads to enrich and enhance the learning experience of students.

Nowadays new information technologies have affected all aspects of human life and education is no exception. Including the main elements guiding learners and the learning process and readiness the necessary context for any planning to make changes in the educational system. (Mehdi-Zadeh et al., 2012)

schools move toward smart and take advantage of ICT in the teaching-learning motivation of learners in the educational process has increased (Shafipour & Yarmohammadian, 2011).

Widespread use of ICT in the education process provided change in pedagogical approaches in the formation of smart schools. (A smart style of schools, 1390) Thus, all signs indicate that we live in an age that is rapidly changing and the growth of electronic communications, especially the Internet on these revolution. Those who have already entered formal education are clearly experience the future will be different from today's world.

Smart School is an educational approach to the integration of information technology and curriculum, major changes in the process of teaching and learning are created. In this approach, the role of the teacher as a guide and not the transfer of knowledge and students will be able to technology in all areas of training Including the

classroom management and program apply. (Tek-ong & Kenneth, 2009)

Smart schools rather than students learn a variety of learning methods to learn to deal with science and new knowledge are not static. Smart IT technology in schools means the exploitation of human thought. So it is wrong to believe that intelligent technology in schools takes place individuals. (Rad-Mard et al., 2012)

Smart school today called perhaps 10 years to complete the tools and communication infrastructure and educational content appropriate the parents. On the other hand, the use of ICT in the learning process as a foundation and structure of the media must learn to change and this only in direct connection and the changing role of the teacher and the student, there is Possibility structural changes in educational content. (Jafari, 2006)

In terms of Azian (2006) Smart School is Including the key requirements of a knowledge-based society and the development of skills, knowledge and entrepreneurial approach enables students.

On the other hand software appealing to children learning how to read better and encourages mathematical problem solving. When combined with fun and engaging way to learn it is easier to see when the page is filled with columns of numbers, and they do it together. (Kimberly & Bruce, 2012)

Smart School concept model In terms of the Ministry of Education Roadmap Smart Schools (2009) developed the IT infrastructure, teaching and learning environment based on multimedia content, school management integrated system, having trained teachers in information technology and communication has been integrated with other schools.

Haj-Babaei (2011) for the establishment of such schools in the country's frequent and relevant regulations in all areas of the country's education. He mentioned smart schools place great importance minister later called Fani (2013) in their programs with the most intelligent class of smart school.

He believed that it is better to gradually create smart classrooms and then take steps to have smart schools. He also announced in 2014 that is now smart boards and tablets in schools and teachers with modern teaching methods, but still not universal and requires time and credibility.

Although documentary released by Tehran's chief executive presented a conceptual model for Smart School, but because of the lack of participation of all stakeholders in the process of creation and adoption of the model, in practice, the current status of smart design schools lack a conceptual model of consensus that explain aspects and components of the plan (Information and Communication Technology Strategy, 2013).

Development of a national network penetration of information and communication (Internet) In schools with priority bridging the digital divide between regions training and appropriate mechanism for optimal utilization and intelligently by educators and students within the framework of Islamic criteria, production and use of electronic content tailored to the needs of students and schools, the development and operation of non-person and virtual training capacity of educational and training programs for teachers, students and families of Iranians abroad based on Islamic criteria and the principles of the educational system through a national network of information and communication to improve the quality of the education process is based on the intelligent use of new technologies (Document turnaround, 2011).

Empower students to take advantage of information technology at all levels of public education in accordance with international standards, facilitate formal training based on information technology in primary schools, middle and high schools, small and large and expanding network and smart schools the main objectives of education. (Performance Center for Statistics, 2013)

According to the above described and different views on definitions, objectives, elements, smart dimensions and components schools, researchers sought to provide an appropriate framework through which a suitable model based on smart dimension in Fars education.

The reality is that such schools would create a great development in the educational system, so that students will be able to ICT training in all areas including administration and apply class schedules. These schools include interconnected components that are designed to expand students' curiosity and active participation, they are designed (Asemi, 2009).

This theme is repeated in Iran's Vision document fundamental change (2011), the Fifth Development Plan (2011) Smart Schools Strategic Plan (2011) Holistic Scientific Map (2009) and document a comprehensive IT system of the country (Performance Statistics Center , 2013) is emphasized. It is natural that the future of the information society needs people who are able to develop innovative information technology to apply.

Smart schools to ensure these needs are planned mainly because the schools students learn how to extract the information need? How about they think and how they obtained their findings to problem-solving and

development into practice (Nasseri & Mashhadian, 2011). For this reason smart schools that are able to manage the school through the Forum, not only to communicate but also a school to provide students a class (Baleghi-Zadeh, 2011).

Development of information technology tools and concepts led to the development of information and easy access and low cost for students, including pupils, students and teachers online method provides and rapid exchange of information and cultural interaction provides. Cultural population growth today depends on convergence and interaction and dialogue and exchange of knowledge and human culture.

Geographical and ideological borders are permeable. Be ready, knowledge and intelligence as well as relying on the elements of indigenous culture and readiness to accept international scientific developments and the role and find its place (Fallon and Brown, 2014).

Course material aging, rapid changes in society and the unpredictability of the future, increasing the volume of knowledge and information, education and continuous learning rather than cross training is necessary. On the other hand, continuing education, new learning methods require, by which the person can be autonomous and independent and for life to the study of knowledge and use it. (Yaghma, 2009)

Widespread use of ICT in the educational process, together with the evolution of the world, has provided smart schools. (Soroush, 2009)

Jalali (2012) in this regard, believes that both teachers and students can engage in the production of electronic content. The importance of smart schools, in terms of the Asefi Amlashi (2009) is that the intelligent use of ICT in schools, teaching quality will nightfall. Because educational opportunities, including practical training provides the charm.

Jalali (2012) believes that smart schools to increase the quality of teaching - learning, continuous updating of knowledge in the development of science in the world, create a platform a continuous learning process of students in and out of school, restoring the authority of teachers, education students to contemporary, is a parent-teacher interaction. Karacapilidis (2010) about the importance of learning through Smart Schools states that electronic-based learning environment to develop active communities for both learning and educational advancement of the learners.

In terms of the Moayyed Nia (2005) smart schools due to a flexible curriculum, to teach new methods, a wide range of programs and teaching methods and focus on up to the student, taking into account individual differences and needs more attention, interests and talents of students, can be used to eliminate or reduce the education gap are useful.

2. Method

Present study in terms of purpose is applied, the type of data, quantitative and descriptive in terms of performance, because the following dimensions, components and their relationships and provide an appropriate model for schools the province are smart. Statistical society of present study all school principals are the province the number of 1364 people.

The sample using the method of random Cochran formula 302 people was chosen. To collect research data, according to the theoretical literature review of research as well as research in the country and abroad, to design and develop a prototype, the research data collection tool. (Questionnaire) To calculate reliability using Cronbach's alpha coefficient is used when calculations show the reliability of 0.98.

As well as about the solidarity of the items related to the infrastructure alpha value of 0.95; internal cohesion statements related to human resources alpha value of 0.95, internal consistency of items related to the teaching-learning process an alpha value of 0.97 and statements related to management internal consistency alpha value is equal to 0.94.

In Section analysis of LISREL software is used. Confirmatory factor analysis model to evaluate the characteristics of χ^2/df, RMSEA, GFI and AGFI, RMR, NFI and CFI is used. Stock χ^2/df no fixed criteria for an acceptable model, but a small amount χ^2/df indicates a better fit of the model. RMSEA index for good models is 0.05 or less.

The higher values of up to 0.08 indicate a reasonable error of approximation in the community. RMSEA is 0.10 or more models that fit poorly. Based on the contract, GFI and AGFI NFI, CFI, should be equal to or greater than 0.90 to be accepted model. (GFI) and (AGFI) and can be affected by sample size for models that have been formulated in such a weak huge. There is no general agreement about the use of them. Good value for RMR also considered is less than 0.05 (Homan, 2014).

3. Findings

Smart dimensions, including the infrastructure, the human resources, the teaching - learning and management. Describe the data using a statistical tables to be summarized.

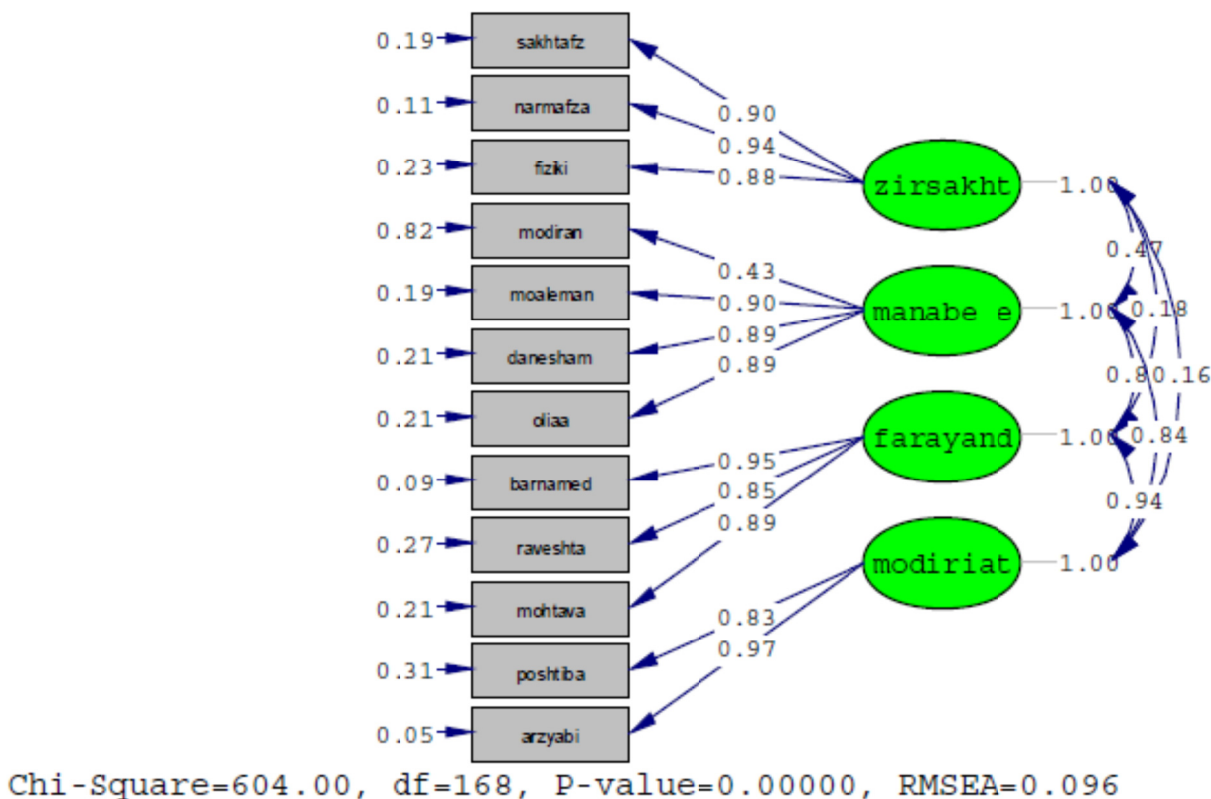Chi-Square=604.00, df=168, P-value=0.00000, RMSEA=0.096

Figure 1. Model of smart dimensions of confirmatory factor analysis in standard estimate

Table 1. Load factor explained variance components smart and education

Explained variance	Factorial load	Variables
0.81	0.90	Hardware
0.88	0.94	Software
0.77	0.88	Physic
0.18	0.43	Manager
0.81	0.90	Teacher
0.79	0.89	Students
0.79	0.89	Parents
0.90	0.95	Education schedule
0.72	0.85	Teaching method
0.79	0.89	Content of site
0.68	0.83	Supporting
0.94	0.97	Evaluation

According to the table above, factor loadings intelligent components of education are visible. In dimension infrastructure, the hardware component loadings ($0.90 = \lambda$) equivalent to ($0.94 = \lambda$) and physical component

equal to (0.88 = λ) is. In dimension human resources management component of load factor (0.43 = λ), a component of Teachers (0.90 = λ), students of (0.89 = λ) and parents of (0.89 = λ).

In dimension process of teaching and learning, curriculum component of load factor (0.95 = λ), teaching methodology equal to (0.85 = λ) and content equal to (0.89 = λ) is. Also In dimension management, with the support component loadings (0.83 = λ) and evaluation component equal to (0.97 = λ) is. In all cases, the load factor smart component of education is higher than 0.4.

Table 2. Indicators of smart components fitted education

Value	Statistic
604	Chi-Square
168	Df
3.59	Chi-Square/ Df
0.09	RMSEA
0.95	GFI
0.89	AGFI
0.97	CFI
0.96	NFI
0.01	RMR

According to LISREL output that is provided in the above table, the amount df/x^2 calculated is 3.59, root mean square error of approximation (RMSEA) at 0.09 against the model. Amount components of GFI and AGFI and CFI and NFI are respectively 0.95, 0.89, 0.97 and 0.96. RMR also studied the value of the model is 0.01, according to the indicators and outputs can be said LISREL; reagents chosen for the smart measure is valid education component above it can measure smart education.

4. Discussion and Conclusion

About smart dimension in education Fars province, smart dimensions including the infrastructure, the human resources, the teaching-learning process and management. As Tek-ong and Kenneth (2009) emphasizes that schools teaching intelligent new approach to the integration of information technology and curriculum, major changes in the process of teaching and learning are created.

In this approach, the role of the teacher as a guide and not the transfer of knowledge and technology students will be able to take in all aspects of training including classroom management and program apply. On the other hand interactive software, students learn to read better and encourage problem-solving method. When combined with a fun and engaging way to learn it is easier (Kimberly & Bruce, 2012).

Smart School is a school-based control and management of computer technology and networking done, most of the content of electronic modules and systems for evaluation and monitoring it is smart, so it should be provided the necessary infrastructure for it. Equipment and communication infrastructure development is one of the axes that smart schools in the Fifth Development Plan (2011) are also taken into consideration. Mehdi-Zadeh et al. (2012) study showed that the provision of computer equipment in school workshops is one of the most important strategies.

Mohajeran et al. (1392) argue that a lack of physical and financial resources to equip smart schools to computer systems and equipment and supplies for the schools of the problems in the development of their schools. According to them, a number of indicators related to technology developed infrastructure components including peripheral equipment (scanners and printers) at school, broadband Internet access, Web site for the school day, the use of security mechanisms on school computers under emergency power, having the cooling facilities on site, existence an e-mail to all students and teachers, the antivirus software free and cheap at the school that they have been considered in the present study In dimension infrastructure.

In dimension of human resources having the teaching and students in the field of information and communication technology computer integrated with families is one of the aspects that can be considered smart schools. Mohajeran et al. (2013) have noted in their research to this dimension.

In fifth development plan (2011) as indicators of training to teachers, educators and parents set up a system of virtual education as the empowerment of human resources are considered. Howard III (2008), Kumar et al. (2008) and Aylvmaky (2008) also each have in their research on human resources and play a crucial role in smart schools have noted.

Center for Statistics and Information Technology and Communications (2011) is one of the most important aspects of teaching and learning as the school's smart. As Niroumand and Bakht-Avari (2011) have emphasized the role of smart school students learn and trainer are responsible, in this school, the curriculum is not limited and students will be allowed to move beyond the curriculum. In this school's student-centered teaching methods based on. The emphasis on thinking skills and provide the teaching - learning strategies and policies is a smart school.

Intelligent management of schools is also an important aspect to consider is that a lot of research. Beyrami-Pour and Badri (1391) found that structural factors management in the application of ICT in the teaching process - learning is very effective. Abdul-Wahabi et al. (2012) have stressed the courses, the ability to pass information to teachers, the ability to manage databases, the ability to share information and knowledge in the information technology, use of training courses and the ability to transfer information, view the transfer and exchange of information decisive role in smart schools.

Smart School, as one of the most important factors and concern for education, an education organization is dynamic and learning that in the learning process and improve the management of the reconstruction is organized for students of different levels to live in an era of change, information and communications prepare.

A smart school as a learning organization and continually evolved over time, their professional staff and educational resources and develop its administrative capacity. Smart School is a school where the entire process, including the process of managing, monitoring, control, teaching - learning, educational resources and teaching aids, evaluation, documentation and administrative, communications and principles of development based on ICT and to improve educational system is designed.

The results of this study, the model suggests that the implementation of the entire process, including the management (monitoring and evaluation, support), teaching-learning (educational resources and content, teaching methods, curricula), human resources (administrators, teachers, students, parents) and infrastructure (hardware, software, physical equipment) to be included. In mart school teachers to teach lessons and increase students' understanding of the material presented and encourage them to learn the lessons of educational slides, educational software, computer games, animation and other multimedia contents in the classrooms benefit.

Besides this system, teachers can also utilize e-learning software and multimedia content created on internet for students outside of school are also provided. Multimedia content production is done in schools to help teachers and students in a specific period will be reviewed and revised. Learning content can be generated in smart schools through electronic portals with other schools and teachers in different schools shared their knowledge with others to share.

Future information society needs people who are able to develop innovative information technology to apply. In this era remain deprived of knowledge, insight and skills of the day, to unemployment, social inequality and leads to the formation of dissatisfaction and tension and smart schools mainly in order to meet these needs are planned. Because in these schools, students learn how to extract information required data through the network, how about they think and how they obtained their findings in order to solve their problems and the development of their communities to operate.

Therefore it is necessary to provide the necessary coordination and adequate measures in this regard, taking advantage of our educational system and the benefits of these new technologies.

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