

## **An Introduction to Obstacles in Decision Support Systems for Management in Educational Organization of Mashhad Province in Iran**

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### **Abstract**

*Decision support systems refer to those kinds of management information systems which are used to support the unstructured and semi structured decisions. In the early days of the DSS field and its related disciplines such as management information system (MIS), Executive information systems (EIS) failures were common and Researches in this field became common. Researches revealed that reasons for the failures was that DSS developers did not pay enough attention to organizational context in which systems would operate and technology factors have had less effect on DSS failures . This Research Tries to reveal the obstacles of the designing and implementation of DSS in educational organization of Mashhad Province related to organizational structure ,organizational culture and the types of decisions .in this research the population universe includes 47 managers of educational organization of Mashhad province. in this research , in order to data analysis the statistic methods below have been used .The descriptive statistics are frequency , percent , mean and criteria deviation .the inferential statistics are (univariate T- test, one- way analysis of variance , schffe , cronbach's Alpha and split halves for computing of coefficient of reliability). also there is a significant level of  $\alpha = 0/05$  for all the hypothesis.After the evaluoation of the hypotheses ,these results have been achieved : 1- the mean of answers of the population*

to the questions of first hypothesis ( the effect of DSS design on organizational structure )is 3/16 that is a little higher than expected result(3) and it is not significant ( $t= 1/83$ ,  $p= /074$ ) .so the first hypothesis is failed.2- the mean of answers of the population to the questions of the second hypothesis( the effect of DSS implementation, on organizational structure )is 3/16 that is a little higher than expected result(3) and it is significant ( $t= 1/96$ ,  $p= 0/050$ ) .so the second hypothesis is accepted. 3- the mean of answers of the population to the questions of third hypothesis ( the effect of DSS design on organizational culture )is 2/75 that is lower than expected result(3) and it is significant ( $t= -3/67$ ,  $p= /0001$ ) .so the third hypothesis is failed.4- the mean of answers of the population to the questions of the fourth hypothesis ( the effect of DSS implementation on organizational culture )is 2/98 that is nearly to the expected result(3) and it is not significant ( $t= -/383$ ,  $p= 0/704$ ) .so the fourth hypothesis is accepted.5- the mean of answers of the population to the questions of fifth hypothesis ( the effect of DSS design on the types of decisions )is 2/66 that is lower than expected result(3) and it is significant ( $t= -4/88$ ,  $p= /0001$ ) .so the fifth hypothesis is failed.6-- the mean of answers of the population to the questions of the sixth hypothesis ( the effect of DSS implementation on the types of decisions)is 2/39, that is lower than expected result(3) and it is significant ( $t= -3/67$ ,  $p= 0/0001$ ) .so the sixth hypothesis is failed.

**Key words:** Decision support systems (DSS), management information system ( MIS) , organizational structure ,organizational culture , type of decisions, designing , implementation, obstacles

## 1. Introduction

Nowadays we can't deny the role of computers interest efficiency in organizations expanse of hand work automate. Till profile advance systems artificial I intelligence flow in organization manage .After to his interest decision of managing are fallowing decisions making without information and knowledge. Clear communication will decrease making decision quality and quick change in knowledge contortion of surrounding technology. Necessity of strategic and making right decision necessity of making decision and settlement information management {MIS} special more expertise of decision system support (DSS) will become manifest. So organizations are systems of social and technical in case of enter computer systems in organ. There is preventing that either connect to organ technique part and social part. Some researches shown that prevents of decision and settlement information before that connect to technique bearing connect to bearing social {behavioral} organ and system. Some of these prevents in structure in culture and making decision method secreted in these research try to that consider in literates research and consideration square prevents and design and settlement DSS in education organs s Mashhad town {whole office }in bearing will be recognized therefore, this study prevent further.

## 2. Background

In case of using support system decide in different background applied like ecological management Of underground water store , management Of river project choicer strategic program technology choice ,analysis of financial medical military and take of decision technical in critical condition and researches of decision is manel . Many works in abroad has done. and research in background of management of information support system decision in the country has done .but a little of this research consider to prevent of design and settlement of this system specially in government organization notice and in

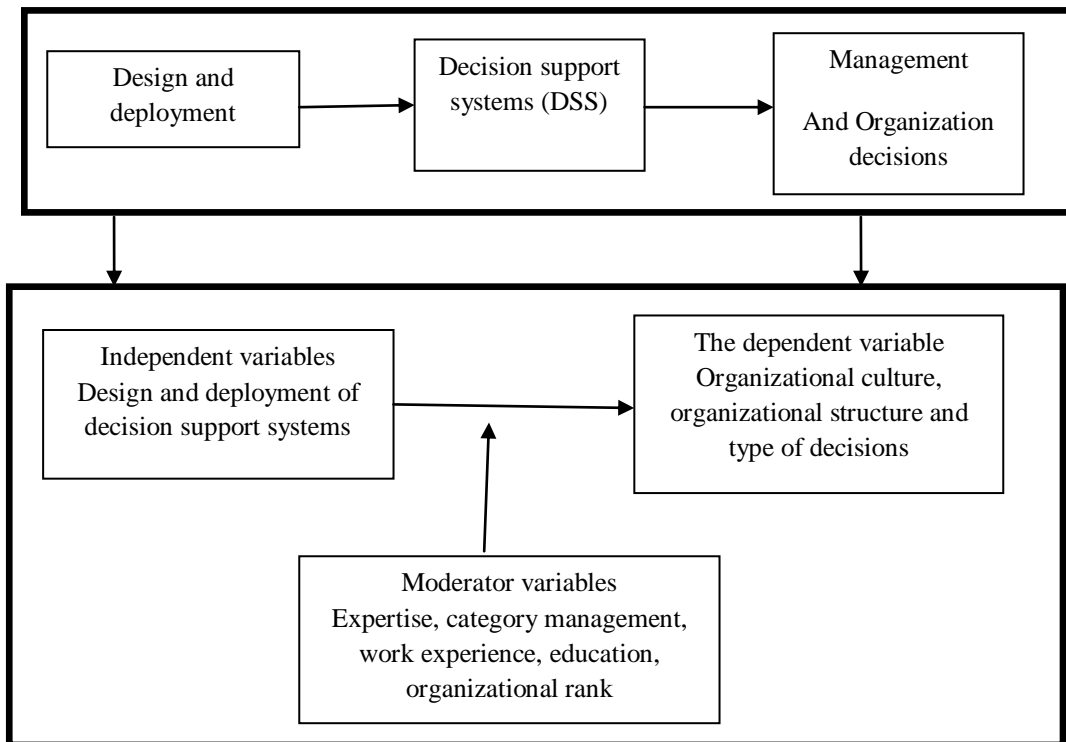
training organization like educating lake of research of science is visible Therefore, in this research more source is needed the usage of information is external as we will mention later .nekoui moghadam (2008)«and so on When we consider connection settlement to management information and organism and the leader ship in Kerman» and the research clearly has shown this fact that there is a connection between a kind of information and System with the structure has approved that important component will help the manager to get information system which is settled in the office and will increase scales ,centralizations in levels .decision, decreases formal scale horizontal and decrease series .zarei and co-operates {document No102385}(2008)Central information and document series of Iran concept design making design system support for the government in this study the attitude process many volume data connect to wide spread and various connect of process with the communication between them will show this fact and wide spread knowledge about process government part is partly necessary to talk about The efficiency of DSS for government is important so that ,has designed in the structure. Islami hervan(2001) This study has been titled(design , pattern ,decision ,system support machinery unit centre ministry holy war agronomy) .this study has been shown that with design pattern system will support management unit holly war agronomy method of security machine with higher ability has done and this decreases expense and alleviation decision later kianfar (2009). This study has been titled system strategic management information and the role it has in decision process will show the information system has, so its management strategic information system and its payment all are considered . Decision process system, information in the organMIS.TPS.DSS.ES and its role in strategic decision is supervised .zirak(letter instruction excellent No17)management information system MIS in elements university organ cultures in this study das mentioned that with enter information system special systems education and university some of this elements have supported and there are too much to talk about some have changed or broken .Mina (2008)This study has been titled decision system support (Dss) this system shows examples of application in other countries and the situation Iran has.farshad(2006) This study has been titled possible application design systems support in management source oil national company areas in the south of Iran “ everything has done shown that :usage application gather and search system information in this area noticeably therefore, effectively proved it will decrease expenses2- it will unit much more activity 3- it will boost communications. zahedi(2008)management role, role system, information, effective technology and decision )this study and information role, the resource is indispensable then management resource Information and review to ever increase to notice reason and management Information systems under title adviser and fellow , that give to management information and decision that is available properly. The aim of Information systems that mixes management and computer expansive area program decision management to help system analysis available information and using management science method decision and the information is being used by computer and inflow pointed to the role of mankind’s and its judgment. D.j.power {2005} a brief history of decision support system [www.Oss resource .com](http://www.Oss.com) in paper in these kinds of decision system support tor being time subject in middle 19s up to 2005 as the technology has been improved the method and a practical system has been considered .Waiman Cheung, Lawrence C. Leung, Philip C.F. Tam , 2004in paper "An intelligent decision support system for service network planning" The joint use of an optimization model and a simulation model as a two-stage methodology has been successfully applied in various operation planning situations, such as service network planning. While using the two-stage methodology, the decision maker who is normally a domain expert, also needs to be familiar with the models. He/she manipulates the two models iteratively to reach a planning solution. This paper presents an intelligent decision support system (IDSS), which integrates a

decision support system (DSS) with an expert system (ES), to provide guidance to the decision-maker during the planning process. As proof of this concept, a PC-based IDSS prototype was built and implemented in the design of a service network for a major air-express courier.ennifer Shang a,□, Pandi R. Tadikamalla b, Laurie J. Kirsch c, Lawrence Brownd, 2008in paper, "A decision support system for managing inventory at GlaxoSmithKline "Firms often turn to supply chain software to streamline and standardize operations. A challenge is how to best utilize the data provided by the software. One approach is to import the data into Decision Support Systems (DSS) to build special-purposed decision aids. This paper presents an effective inventory management model for GlaxoSmithKline (GSK). The DSS effectively determines the safety stock level and the number of weeks forward coverage (WFC) for each SKU (Stock Keeping Unit).We discuss GSK's experiences relative to the literature on DSS design, implementation, and usage. This research shows implementing the proposed decision support system would provide GSK a distinct competitive advantage. However, careful implementation is necessary to fully realize the potential of the DSS Melody Y. Kiang a,e,Dorothy M. Fisher b, Jeng-Chung Victor Chen c, Steven A. Fisher d, Robert T. Chi a2009in paper, "The application of SOM as a decision support tool to identify AACSB peer schools". For a business school, the selection of its peer schools is an important component of its International Association for Management Education (AACSB) (re)accreditation process. A school typically compares itself with other institutions having similar structural and identity-based attributes. The identification of peer schools is critical and can have a significant impact on a business school's accreditation efforts. For many schools the selection of comparable peer schools is a judgmental process. This study offers an alternative means for selection; a quantitative technique called Coonan's Self-Organizing Map (SOM) network for clustering. In this research, we first demonstrate the capability of SOM as a clustering tool to visually uncover the relationships among AACSB-accredited schools. The results suggest that SOM is an effective and robust clustering method. Then, we compare the results of SOM with that of other clustering methods, such as K-means, Factor/K-means analysis, and kith nearest neighbor procedure. The objective of this study is to demonstrate that a two-dimensional SOM map can be used to integrate the results of various clustering methods and, thus, act as a visual decision support tool. Soussan Djamab, 2006in paper, "Does positive affect influence the effective usage of a Decision Support System?"This study examines the impact of positive mood on the effective usage of a Decision Support System (DSS). Using current cognitive theories, a theoretical argument about DSS usage is developed. This argument is then investigated via a lab experiment. The results of the lab experiment show that decision makers in positive mood used a greater number of informational cues provided by the DSS and made more accurate judgments.Preface2007,"Environmental decision support systems: Current issues, methods and tools "Development of environmental decision support systems (EDSS) is rapidly progressing. The sustainable management of natural resources has a growing research focus as the awareness of the complexity of interactions between socio-cultural, economical and biophysical system components is increasingly acknowledged. As better data and methods become available, the complexity of the system representation is augmenting. At the same time realism and relevance are increasing and allowing direct support for management and policy development. This article gives the background of recent developments in EDSS and summarizes a selected set of papers that were presented at the 2nd Biennial Conference of the International Society of Environmental Modeling and Software (IEMSS 2004). Recent developments show a continuum between integrated assessment modeling and EDSS with varying levels of stakeholder participation in both EDSS development and application. There is a general tendency towards better utilization of interdisciplinary data, integration and

visualization of temporal and spatial results. Future developments appear directed towards better representation of reality in models, improving user-friendliness and use in a negotiation or group discussion context. Daniel J. Powera,\*<sup>1</sup>, Ramesh Shardab<sup>2005</sup> in paper, "Model-driven decision support systems: Concepts and research directions "In some decision situations, quantitative models embedded in a Decision Support System (DSS) can help managers make better decisions. Model-driven DSS use algebraic, decision analytic, financial, simulation, and optimization models to provide decision support. This category of DSS is continuing to evolve, but research can resolve a variety of behavioral and technical issues that impact system performance, acceptance and adoption. This article includes a brief survey of prior research. It focuses on model-driven DSS built using decision analysis, optimization, and simulation technologies; implementation using spreadsheet and web technologies; issues associated with the user interface; and behavioral and technical research questions. H.J. Murffa,\*<sup>1</sup>, T.K. Gandhib, A.K. Karsonc,<sup>d</sup>, E.A. Mortc, E.G. Poonb,<sup>1</sup>S.J. Wangd, D.G. Fairchild b, D.W. Batesb<sup>2003</sup>,in paper "Primary care physician attitudes concerning follow-up of abnormal test results and ambulatory decision support systems" Failures to follow-up abnormal test results are common in ambulatory care. Information systems could assist providers with abnormal test result tracking, yet little is known about primary care providers attitudes toward outpatient decision support systems. *Methods:* A cross-sectional surveyor 216 primary care physicians (PCPs) that utilize a single electronic medical record (EMR) without computer-based clinical decision support. *Results:* The overall response rate was 65 % ( 140/216). Less than one-third of the respondents were satisfied with their current system to manage abnormal laboratory, radiographs, Pap smear, or mammograms results. Only 15% of providers were satisfied with their system to notify patients of abnormal results. Over 90% of respondents felt automated systems to track abnormal test results would be useful. Seventy-nine percent of our respondents believed that they could comply better with guidelines through electronic clinical reminders. *Conclusions:* Most PCPs were not satisfied with their methods for tracking abnormal results. Respondents believed that clinical decision support systems (CDSS) would be useful and could improve their ability to track abnormal results. Zoonky Lee a, Christian Wagner b, Ho Kyoung Shin a,\*<sup>2008</sup>, "The effect of decision support system expertise on system use behavior and performance "We performed an empirical investigation into the effect of users' decision support system (DSS) expertise on their problem-solving strategies. The results indicated that individuals who had only recently learned to use the DSS were confused or restricted by the set of functions provided by the system and did not plan well for their use of the DSS. Those who had previous knowledge of the system exhibited more focused and efficient problem-solving behavior. Our findings suggested that problem-solving strategies depended significantly on the user's level of system expertise. Jerry Fjermestad\*<sup>2003</sup>in paper, "An analysis of communication mode in group support systems research "Group support systems (GSS) have been the subject of many investigations and meta-analyses over the past decade. This study presents, summarizes, and analyzes the results of 145 experiments that used communication mode as an independent variable. The results show that the modal outcome for GSSs compared to Face-to-Face (FtF) methods is "no difference," while the overall percentage of positive effects for results that compare GSS to FtF is 29.2%. The results suggest that the use of a GSS improves decision quality, depth of analysis, equality of participation, and satisfaction over manual methods. Additionally, more detailed analysis suggests that task type, GSS type and the interaction of both have a moderating effect on adaptation and outcome factors. Specifically, groups working on idea generation tasks using GSS decision room technology improve to 39.6 % ( GSS>FtF) effect. Conversely, asynchronous computer-mediated communication (CMC) groups working on decision making tasks improved to 46.4% (GSS>FtF) effect.

FtF groups show higher levels of consensus and perceived quality, communicate more, and are more efficient (requiring less time to complete the tasks). No differences are observed between FtF and GSS groups on satisfaction and usability.

### Research Conceptual model



### 3. Research Hypothesis

- Design of decision system support in management organ educated of Mashhad city has affected organ structure.
- Settlement of decision system support in management organ educated of Mashhad city has affected organ structure.
- Design of system support in management organ education the city of which {Mashhad} has affected the organ structure.
- Settlement of system support in management organ education the city of which {Mashhad} has affected the organ structure.
- Design of decision system support in management organ educated of Mashhad city has affected on the type of decisions.
- Settlement of decision system support in management organ educated of Mashhad city has affected on the type of decisions.

#### 4. Method

In this research information is connected to theoretical frame work base on index card of science source like: magazines, books, symposium, and thesis In addition, the net are the references' which are being used. in square search this study the method is questionnaire with the aim of recognizing, preventing decision settlement OSS that is connected to the organs structure and culture more ,using a kind of decision in educational system.

#### 5. Research Area and Statistic Community

This research was in Mashhad in part where educational system is, goes back to the year 1389 –1390 Statistic social include manager assistant, chief group and organ unit responsible expert stuff. That limited Statistic social using census method {choice whole or sample}

#### 6. Results Related to Hypotheses

This study includes the following hypothesis is that the hypothesis with the result so the analysis is presented in this section.

**Hypothesis 1:** From the view point of management education Design of decision system support on management organ education has affected the structure system .

This research Hypothesis includes decision system in educational system and the effects it has.

Table 1: Comparing the number of effects Decision support structure system The effect on educational system and structure From the view point of management education with a mean score criterion(3).

surface Significance(p)	observed (t)	df	Test value	SD	Mean	Variable
0/074	1/83	46	3	0/581	3/16	Effect Design of decision support systems in management education on organizational structure

Refer to table 1, The answer is connected to management education and decision more over ,support with 3,16 a little more than average scale number 3 and in statistic this is not that much important .  $t=1/83$   $p=74\%$  And therefore, the last Hypothesis1 has not improved .in the other phrase of Set management education ,Design of decision support systems in management education has a moderate effect on the organizational structure.

**Hypothesis 2:** From the view point of management education settlement of decision system support on management organ education has affected the cultural system.

Table 2: Comparing the average number of Establishment effect decision system support on management on management system structure and managing the structure from the view point of management education with a mean score criterion (3).

surface Significance(p)	observed (t)	df	Test value	SD	Mean	Variable
0.050	1/96	46	3	0/556	3/16	Effect settlement of decision support systems in management education on organizational structure

Refer to Table 2 Effects have shown with average answer and whole educational system Settlement support average 3/16 a little more than average scale number 3 and in statistic this is not that much important .  $t=1/96$  This shown in other phrase managements Settlement system support and its effects.

**Hypothesis 3:** From the view point of management education Design of decision system support on management organ education has affected the cultural system.

Table 3: Comparing the average number of Design effect decision system support on management on management system cultural and managing the structure From the view point of management education with a mean score criterion(3).

surface Significance(p)	observed (t)	df	Test value	SD	Mean	Variable
0.0001	-3.67	46	3	0.470	2/75	Effect Design of decision support systems in management education on organizational cultural

Refer to table 3 the average answer is connected to decision system support 2/75 less than average number 3 this is meaningful -3/67  $p=0/0001$  So is proven that management organ education has no affect cultural system .

**Hypothesis 4:** From the view point of management education settlement of decision system support on management organ education has affected the cultural system.

Table 4: Comparing the average number of settlement effect decision system support on management on management system cultural and managing the cultural from the view point of management education with a mean score criterion (3).

surface Significance(p)	observed (t)	df	Test value	SD	Mean	Variable
0.704	-0.383	46	3	0/381	2/98	Effect settlement of decision support systems in management education on organizational cultural



Refer to Table 4 the average answer supported in managerial system inn cultural is 2/98 the scale is 3 and in statistic this is not that much important.  $t=0/383$   $p=704\%$  so is proven that management organ education Settlement system in managerial system is effective.

**Hypothesis 5:** From the view point of management education Design of decision system support on management organ education has affected on the type of decisions system.

Table 5: Comparing the average number of Design effect decision system support on management on management system cultural and managing on the type of decisions from the view point of management education with a mean score criterion (3).

surface Significance(p)	observed (t)	df	Test value	SD	Mean	Variable
0/0001	-4/88	46	3	0/476	2/66	Effect Design of decision support system in management education on the type of decisions

Refer to Table 5 the whole answer In managerial system is related to questions design effects system support In managerial system on kind of design equal 2/66 less than average scale this is meaningful  $t=-4/88, p=0/0001$  therefore ,Is proved .

**Hypothesis 6:** From the view point of management education settlement of decision system support on management organ education has affected the cultural system.

Table 6: Comparing the average number of settlement effect decision system support on management on management system cultural and managing on the type of decisions from the view point of management education with a mean score criterion (3).

surface Significance(p)	The observed (t)	df	Test value	SD	Mean	Variable
0.0001	-6.34	46	3	0.655	2/39	Effect settlement of decision support systems in management education on the type of decisions

Refer to Table 6 Effect settlement system decision system Managerial education on a kind of decision is being shown on table6 in questions related to effect settlement system support Managerial education on a kind of design equal 2/39 least of average on statistic is meaningful  $t=3/67$   $p=0/0001$ So is not proven In other phrase on collect in Managerial education system support decision on Managerial education on kind of decision has no effect.

## 7. Conclusion

What is founded in our hypothesis?

- Design system has effect on Managerial educational system in Mashhad in first step we find out making it had a lot of effects on Managerial system so it was not proved.
- Design systems have effect on Managerial educational system in Mashhad was descriptive therefore; acceptable having our support will help managers do their task better.
- Design system has effect on Managerial educational system in Mashhad had no effect on cultural system more, wasn't proved in addition ,shown that anphormatic culture is much more than cultural information
- Design system has effect on Managerial educational system in Mashhad has a lot of effects on cultural system more, having our support will help gathering data and giving them to stuff in a right moment will help making quick designs therefore ,using culture correctly .
- Design system has effect on management therefore our study showed in total managers think that Designing systematic support has no effect on decisions according to statistics this hypothesis was wrong. This is because of making central decisions as we analyze our data we can see this fact.
- Design systems has no effect on Managerial educational system in Mashhad having systematic support has no effect on decisions so is not proven hypothetically as we refer to our descriptive data we see that this matter is due to this fact that hardly ever do we use our systematic support in designs which are organizational.

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