

THE REALITY OF USING THE MANAGEMENT INFORMATION SYSTEMS (M I S) IN EMERGING SAUDI UNIVERSITIES ACCORDING TO THE STANDPOINT OF THE ADMINISTRATIVE AND ACADEMIC LEADERS

Dr. Mansour Bin Zaid Ibrahim Al-Khathlan
Prince Sattam Bin Abdulaziz University

Introduction:

University is a social institution of higher educations that consists of a number of colleges and grant university degrees to its graduates and provide them with the necessary knowledge skills to develop their contribution to the community and its development throughout scientific research, but in the terms of the multidimensional definition of the modern university; “the university” – according to the functional definition- means the progress of higher education, training and scientific research, development, and the community service in various fields of development.

Nowadays “Information” is an essential resource for modern organizations resources more than ever, just like the capital and human resources- where so many of the essential management processes such as; planning, making decisions, the development, evaluating performance, and others without relying on information. Therefore, informatics now constitutes a strategic resource that raises the productivity and effectiveness of the organization, and it is an important weapon in the face of intense competition between organizations, whether governmental or private organizations, (**Haider and Hassania, 2002**).

Emerging Universities such as “**Prince Sattam Bin Abdulaziz University**” aspire to occupy a place among the most prestigious universities in Saudi Arabia and are trying to attain it through the development of working out procedures to be consistent with the recent trends, whereas the **Management Information Systems (M I S)** represent an important axe that is worked on to fulfill the main objectives that are aspired by those universities.

The main problem of this worksheet:

The importance of information systems is highlighted in several studies including **El-Sharif study (2008)**, which aimed to develop information and communications systems and its techniques, or in other words its role in government institutions management and the use of the current case method as an access mean to the depth of the subject in order to overthrow the theoretical study on the reality of Education Foundation and making a deep characterization/description for this characterization/description in order to scrutinize every part of the phenomenon. The study has come out with a number of recommendations including: developing a strategy for information systems inside the Ministry and integrating these projects into one project or developing school mapping project, statistics project, the management systems and mainstreaming its use. (**Moussaoui and Muhammad “2009”**) study aimed to focus on the impact of the use of information systems on the performance of economic institutions, so a manual questionnaire has been developed and distributed to respondents (workers) in insurance companies in Constantine Province to achieve the objectives of the study. Forty (40) survey questionnaires have been adopted from the main fifty (50) distributed questionnaires and the results, by analyzing the responses to the questionnaires statistically, showed that the use of information systems in insurance companies has an important role on its total role, but the actual usage or optimal investment for information systems in insurance companies in Algeria is still limited because of the existence of obstacles and limitations related to managers and leaders, and the available technical, information and material potential.

The associated studies illustrated the importance of the **Management Information Systems (M I S)** to improve the performance in various institutions and the sound investment of the available human potential in institutions that can be caused, so **the main problem of this paper/worksheet can be formulated in the following question:**

What is the reality of the Management Information Systems (M I S) in emerging universities in Saudi Arabia from the standpoint of administrative and academic leaders about it?, and then comes the following branching questions from the main question:

1- What are the reality of the **Management Information Systems (M I S)** in emerging universities in Saudi Arabia from the standpoint of administrative and academic leaders about it and the performance of this paper/worksheet with all its axes?

2- Are there statistically significant differences between the responses of the respondents attributed to the variables of this paper (academic qualification) and (years of service) in their sole discretion with respect to the reality of the **Management Information Systems (M I S)**?

This paper/worksheet also sought to achieve a number of objectives including:

- To determine the accuracy of the information provided by the information system, in addition to its adequacy and how it can meet the needs of the university employees and to be unmistakable.
- To determine the possibility of how the staff can express their views on work to be able to contribute to the development.
- To determine the speed and ease in providing the necessary and required information in time, and the extent of maintenance provided in the case of its breakdown.

The importance of this paper/worksheet lies in the importance of the role of the **Management Information Systems (M I S)** in development, due to its role in supporting the key management jobs in universities such as planning, decision-making, development, especially with the expansion of its scope of work, and the multiplicity of its functions. Its importance also stems from the rapid development in the field of information and communication systems, where the management official can now -with one click- get the information needed, besides the options available for decision-making.

This paper/worksheet also contribute to the resignation the reality of the **Management Information Systems (M I S)** in emerging Saudi universities and it will also contribute to the submission of proposals to improve its work and achieve good performance levels.

Worksheet terms:

The worksheet included the following terms:

Management Information Systems (M I S)

“Hamidi et al, 2004 – p.73” defined the management information systems as: “A systematic computerized system that is capable of integrating data with a view to provide the necessary information to make decisions”.

Al Shammari (2008- p.23) defined it as; “one of the subsystems of departments and sections, which specializes in collecting and processing data - manually or automatically - in order to turn it into useful information to be able to serve decision makers and to be consistent with their needs”.

Procedurally in this worksheet it is defined as; “A group of devices and methods used in emerging Saudi universities to save and exchange information and getting it”.

Administrative and academic leaders: They are the members of the study staff who are working in the emerging Saudi universities in Saudi Arabia from university administrators, deans, deputy rectors, heads of departments, and department directors in it.

The theoretical framework of the worksheet:

Management Information Systems (concept, types, objectives):

The **Management Information Systems (M I S)** in general are seen as the technological use in helping the management to accomplish its objectives through designed systems and programs to be able to run management processes in an easy technological technique and method in better than traditional methods, in addition to achieving abundance in the sources and resources of the organization and increasing the efficiency and productivity of these processes Bani Ahmad (2009).

Yassin (2003) sees that the **Management Information Systems (M I S)** is an integrated system including; individuals, devices, procedures, and subsystems for the information in order to provide management with everything needed such as; accurate, adequate and comprehensive information related to the accurate activities of the organization in order to accomplish management functions.

Moreover, **Lutfi (2005)** sees that the information systems aimed at providing information and environmental information services, and it must have two partial systems at least: the first focuses on system aggregation for information, and the second to provide information services. **Management Information Systems (M I S)** can be defined as; “a set of overlapping and interacting elements with each other that work on data and information collection, as well as its processing, storage, transmission, and distribution in order to support decision-making industry and coordination and to secure the control of the organization, in addition to the analysis of the problems and securing the perspective required for complex topics”. Information System includes data related to individuals, places and activities and other matters pertaining to the organization and its surrounding environment.

There are many classifications for the **Management Information Systems (M I S)** that vary according to researchers and the fields in which they work at. In terms of functions performed by the organization, there are the so-called information systems of production and manufacturing and information systems of marketing, finance and human resources, where some classified it according to the management activities such as; information systems of planning, and information systems of monitoring and evaluation, and others classified it according to the management level in the organization such as; the systems of strategic senior management support, the systems of middle management support, and the systems of operational management, **Bani Ahmad (2009)**. **Hawari (2008)** classified it as follows:

- 1- Management Information Systems according to management levels:
 - The senior management support information systems (Strategic Level).
 - Decision support systems and the collective decision support systems (Tactical Level).
 - The management reporting systems (Technical Level).
 - The transaction processing systems (Operational Level).
 - Offices management systems (Operational Level).
- 2- Management information systems according to management functions:
 - The marketing and sales information systems
 - The human resources information systems
 - The accounting and finance information systems

Management Information System has a set of objectives, which seeks to attain the following objectives:

- 1- Connecting subsystems within the system and coordinating it with each other to form an integrated system.
- 2- Connecting subsystems objectives with the overall objective of the system and its vision, and thus to achieve this objective.
- 3- The system helps in the decision-making process and taking the decision.
- 4- The system provides the necessary and essential information to planning and controlling processes inside the institution and facilitating that process.
- 5- Information System works to tighten controls on the process of information circulation, archiving, retrieval and using it.
- 6- Improving the productivity of the institution through submitting periodic reports, the development of working methods and techniques, predicting future problems that may be facing the institution, and working on the development of preventive arrangements in this regard.
- 7- Developing the institution work through feedback and reports, in addition to benefiting from information in the adjustment process and correct deviations. (Sultan, 2005)

Abu Ella (1426), on the other hand, sees that the **Management Information System (M I S)** seeks to achieve three objectives: “to provide information for the purposes of decision- making and providing information to help in the conduct of daily operations -to provide the necessary information about the extent of responsibilities fulfillment by the management.

Al-Sahyaa (1424) also sees that the **Management Information Systems (M I S)** aimed at the following: “linking numerous sub-systems together into an integrated entity that works on data streams coordinating and providing the correct and appropriate information for those who ask for it, facilitating the decision-making processes on all its qualities and levels by providing selected and appropriate information in the right format and at the right timing and to help in deciding the path of the actual performance, providing the appropriate information for the purposes of monitoring, control and performance measurement, and simplifying the ways and methods of preparing and producing reports on all its types and forms, such as: (Performance reports, accounting and financial reports, and students results reports), and educational information systems in the educational field work on determining the educational policies, preparing reforms, evaluating the priorities in the field of education. Moreover, the educational information systems can also help those who are working at the education field at all contribution levels in the educational development (**The Interview, 2005**).

Worksheet Procedures:

Arithmetic means and standard deviations were used for the responses of respondents of each area of the worksheet to answer the worksheet questions, as well as the use of the arithmetic means, standard deviations, and ANOVA are to identify the implications of the differences between the means of respondents responses on the areas of worksheet performance according to the academic qualification and years of service variables.

Discussing the results:

Results related to the first question that states; “What is the reality of Management Information Systems (M I S) at the emerging universities in Saudi Arabia from the standpoint of administrative and academic leaders, as well as the performance of this worksheet with all of its axes”?

To answer this question, the arithmetic means and standard deviations for the responses of respondents “from academic and administrative leaders” on performance areas statements were calculated and the following table shows it:

Arithmetic means, standard deviations, and the degree of application on the areas of performance as a whole:

Area/ Fields No.	Areas/ Fields	The Arithmetic Means	The Standard Deviation	Field Order	The Level
1	The accuracy of information	3.29	0.86	1	High
2	The comprehensiveness of information	3.21	0.91	2	High
3	The flexibility of information	3.05	0.91	4	High
4	The appropriate timing of information	2.90	0.87	6	Medium/ Average
5	The clarity of information	2.97	1.27	5	Medium/ Average
6	Technology used	3.07	0.92	3	High
The Performance as a whole		3.08	0.96		High

Discussing Results:

The previous table shows the arithmetic means, standard deviations, and the degree of application on the areas of performance of the worksheet, and the performance as a whole; where the reality of **Management Information Systems (M I S)** at the emerging universities in Saudi Arabia from the standpoint of administrative and academic leaders came at a high level of application with arithmetic mean of (3.08) and standard deviation of (0.96).

The **accuracy of information** ranked first with an arithmetic mean of (3.29) and standard deviation of (0.86), and a high level of application, then the field of **comprehensiveness of information** ranked second with an arithmetic mean of (3.21) and standard deviation of (0.91), and a high level of application, then the field of **technology used** ranked third with an arithmetic mean of (3.07) and standard deviation of (0.92), and a high level of application, then the field of **flexibility of information** ranked fourth with an arithmetic mean of (3.05) and standard deviation of (0.91), and a high level of application, then the field of **the clarity of information** ranked fifth with an arithmetic mean of (2.97) and standard deviation of (1.27), and an average level of application, and the field of **the appropriate timing of information** ranked sixth and last place with an arithmetic mean of (2.90) and standard deviation of (0.87), and an average level of application.

The relationship between the results of the current worksheet and previous studies:

The results of the current worksheet agreed with the results of **Kawars' study (2007)** that the degree of appreciation on the high effectiveness of the use of **Management Information Systems (M I S)** in all fields by the management educational leaders, while it disagreed with the results of **Bani Ahmad (2009)** as the arithmetic means of respondents' responses showed a mean degree of use for all the areas of performance, while in another study "The Interview" (conducted in 2003) it showed the reality of the **Management Information Systems (M I S)** used by department heads are characterized by accuracy, clarity, comprehensiveness, timeliness "the appropriate timing" and flexibility respectively, while in the current worksheet it comes as follows: (accuracy, comprehensiveness, the technology used, the flexibility, clarity, and then the appropriate timing).

Also, the results of this worksheet agreed with **Al-Shammari's study (1429)** in terms of satisfaction of respondents that was good in total on the provided information by **Information Departments** in terms of (accuracy, appropriate timing, relevance, cost, clarity, objectivity, reliability), but it partially disagreed with the current worksheet in terms of (comprehensiveness, flexibility) and its average level/degree whereas the fields of (comprehensiveness, flexibility) came in high levels/degrees.

Moreover, the results of this worksheet disagreed with **Suhaimis's study (2012)** where it indicated that perceptions of **Management Information Systems (M I S)** are with average level, as well as the presence of the effect of the dimensions of **Management Information Systems (M I S)** (the novelty of devices used, the ease use of management information system, the efficiency of workers in management information systems, the use of appropriate software/programming **Management Information Systems (M I S)**, adequate information in **Management Information Systems (M I S)**).

Additionally, the majority of previous studies' results agreed that the information systems and its techniques have an active role in decision-making process in different institutions and that the lack of precision and errors, clarity and comprehensiveness, objectivity and modernity, simplified presentation and appropriate timing of the information must be available in information and to the management of these institutions, and **Management Information Systems (M I S)**, so that the information technology can enhance the effectiveness of institution and the efficiency of its performance.

The related results of the second question that states; **“Are there statistically significant differences between the responses of the respondents attributed to the variables of this paper (academic qualification) and (years of service) in their sole discretion with respect to the reality of the Management Information Systems (M I S)”?**

First: Academic Qualification

To answer this question, the arithmetic means, standard deviations, and ANOVA were used to identify the implications of the differences between the means of respondents' responses on the performance of worksheet according to the academic qualification variable and the following table shows the ANOVA for the significant differences in the responses of respondents on the worksheet's performance according to the academic qualification variable:

The Number	The Variation source	The total deviations	Degrees of freedom	Squares Means	The calculated vale of “F”	The level of significance
1	Shows the groups	3.116	3	1.039	*3.173	0.028
2	inside college	30.780	94	0.327		
3	groups	33.896	97			

* Statistically significant at the level of significance ($\alpha = 0.05$)

The previous table shows the presence of significant statistical differences in respondents' responses of the worksheet on college performance according to the levels of academic qualification variable, the value of “F” calculated b(3.173), which is a statistically significant at the significance level ($\alpha = 0.05$), so **“Scheffé Test”** for posteriori comparisons was done to identify the differences source, and the results were as the following table shows like **“Scheffé Test”** results for posteriori comparisons on college performance according to the academic qualification variable:

Levels	The Arithmetic Mean	Levels			
		BA	Higher Diploma	M.A.	PhD
BA	3.0124	-	0.37057	0.23394	0.22682
Higher Diploma	3.3830	-	-	0.60451	0.14375
M.A.	2.7785	-	-	-	*0.46076
PhD	3.2392	-	-	-	-

The previous table shows the presence of statistically significant differences, as it was indicated by **“Scheffé Test”** results that there are significant statistical differences in respondents' responses on college performance according to the academic qualification variable, specifically between the Master (MA) qualified ones and the PhD qualified ones

and in the favor for the latter where his arithmetic mean reached to (3.2392) unlike the M.A qualified ones; where it reached to (2.7785). This is a normal result as the one who has the higher academic qualification is keener than the one who has a lower academic qualification, and it goes also to that those who have PhD are almost academics and are keener than others on distinct availability of **Management Information Systems (M I S)**.

Second: Years of Service:

To answer this question, the arithmetic means, standard deviations, and ANOVA were used to identify the implications of the differences between the means of respondents' responses on the performance of worksheet according to the years of service variable (less than 8 years- from 8 years to less than 16- from 16 and more), and the following table shows the ANOVA for the significant differences in the responses of respondents on the worksheet's performance according to the years of service variable:

The Number	The Variation source	The total deviations	Degrees of freedom	Squares Means	The calculated vale of "F"	The level of significance
1	Shows the groups	0.428	3	0.214	0.608	0.547
2	inside college	33.468	95	0.352		
3	groups	33.896	97			

* Statistically significant at the level of significance ($\alpha = 0.05$)

Previous table shows that there were no statistically significant differences in the responses of respondents on the performance of college according to the years of service variable; it may be due to the fact that there is almost a consensus among administrative and academic leaders at universities on the importance of information systems to reach to excellence.

In light of the results of worksheet, we can conclude to recommendations including:

- Adopting strategies that contribute to promoting creativity and personal initiatives, as well as taking into considerations the provided suggestions from all those who are dealing with the **Management Information Systems (M I S)** on a regular basis.
- Holding meetings, seminars and training workshops to enrich the system, to develop the expertise of employees, and to increase their efficiency.
- The continuity of the provision of related expertise for the maintenance of the system and to make adjustments to be able to keep pace with developments.
- The need for continues pursuit to keep abreast of developments in the **Management Information Systems (M I S)** and information technology used in the world's leading universities.

References:

- 1- **Abu Ella, Rania Anwar (1426)**, "The Strategic and informational planning in a globalizing world"- Unpublished Master Thesis, Department of Business Administration at the Faculty of Economics and Administration, King Abdulaziz University, Jeddah, Saudi Arabia.
- 2- **Bani Ahmed, Ahmed Awad (2009)**, "A proposed strategy for the development of management information systems at the Ministry of Education of Jordan, unpublished PhD thesis, University of Jordan, Amman, Jordan.
- 3- **Al Hamidi, Najim Abdullah et al. (2004)**, "Management Information Systems (Contemporary Introduction)", Dar Wael for publication- Jordan, First edition.
- 4- **Haider, Maali Fahmi (2002)**, "Introduction to information systems to achieve competitive advantage", University House, Alexandria.

- 5- **Suhaimi, Khaled Mash'an (2012)**, "The impact of management information systems on the design of the organizational structure of the in Saudi Aramco Co., Saudi Arabia, available on Web: <http://e-thesis.mutah.edu.jo/index.php/faculty-of-business-administration/53-department-of-public-administration/805-2012-05-08-19-06-02.html>
- 6- **Sultan, Ibrahim (2005)**, "Management Information Systems - Systems Approach, Egypt, University House for printing, publishing and distribution.
- 7- **Al-Shaya, Ali Suleiman (1424)**, "The effectiveness of information systems to increase the educational and training efficiency" - Master Thesis submitted to Naif Arab Academy for Security Sciences, Riyadh.
- 8- **Al Sharif, Abdu Naaman (2008)**, "The role of information systems in the management of government institutions"-The case of the Ministry of Education in the Republic of Yemen- Master Thesis, Algeria - Faculty of Economics, Trade and Management Sciences- Management Sciences Department.
- 9- **Al Shammari, Mash'an Daifallah (1429)**, "The development of management information systems in education departments for boys in Saudi Arabia from the standpoint of education managers and their assistants, heads of departments- A Depicting Proposal"- Unpublished PhD Thesis- Umm Al Qura University, Saudi Arabia.
- 10- **Kawar, Shafa'a Saleh (2007)**, "The estimation degree of educators in the Ministry of Education in Jordan for an effective use of the Management Information Systems and its relation to their organizational commitment and morale- Unpublished PhD Thesis- Amman Arab University for Graduate Studies: Amman, Jordan.
- 11- **Lutfi, Amin El-Sayed (2005)**, "Management Information Systems, review and audit" - University House, Cairo.
- 12- **The interview, Mohammad Qassim (2003)**, "The reality of Management Information Systems in the departments of Education in Jordan and its relationship to practice degree of department heads for the management process jobs from their point of view- Unpublished PhD Thesis -Amman Arab University for Graduate Studies: Amman, Jordan.
- 13- **The interview, Mohammad Qassim (2005)**, "The reality of Management Information Systems and its relationship to management process jobs and its educational applications-The Modern World of Books, Irbid, Jordan, First edition.
- 14- **Moussaoui, Abdel Nour; Mohammed, Hoda (2009)**, "The impact of using Information Systems on the performance of economic institutions- Applied study on insurance companies in Algeria- A study presented to the Second Conference of College of Business- University of Jordan; "The pressing issues of the emerging economies in the modern business environment", 14- 15 April 2009.
- 15- **El Houari, Sayed (2008)**, "The Management; its basics and scientific foundations in the 21th Century"- Dar Al Sharif, Cairo.
- 16- **Yassin, Saad Ghalib (2003)**, "Management Information Systems"- Oman, Dar Yazouri for publication and distribution.