

## ATTITUDES OF SAUDI UNIVERSITIES FACULTY MEMBERS TOWARDS USING LEARNING MANAGEMENT SYSTEM (JUSUR)

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### ABSTRACT

The research aims to identify the Attitudes of faculty members at Saudi Universities towards using E-learning Management System JUSUR, which follows the National Center for E-learning. A descriptive analysis was used as a research methodology. (90) participants in this research were asked to complete a 5-point Likert scale questionnaire, which consists of (34) items, classified in three main categories, and (2) items as probe statements. Validity and reliability of the questionnaire were ensured. Statistical treatments such as percentages, means, frequencies, and analysis of variance ANOVA were conducted. The results showed a positive Attitudes of the members of the faculty at Saudi University towards E-learning management system JUSUR, although it has not activated in a sufficient way yet, the results showed how their needs for training in using the system and in particular learning content management and file sharing, forums, and Questions Bank. Moreover, results showed no difference in attitudes towards using the system among the faculty members regarding gender or the types of colleges humanitarian, scientific and health. The paper has 9 tables, 9 shapes, and 20 references.

**Key Words:** E-learning, Learning management system (LMS), JUSUR, Faculty Members, Attitudes, Saudi universities.

### 1. INTRODUCTION

The E-learning is an important development taking advantage of computer technologies and software, communications and information, to be employed in the process of teaching and learning, where it has become one of the alternatives in the dissemination of education and activating the training, whether direct or indirect, overcoming the obstacles of space and time and risk, and provided for the teacher's experiences effectively, enriched the learning and development teaching, and has become a Modern teaching method, employing modern communication mechanisms; to support the educational process, enrich and improve the quality.

The E-learning should not only seen as a set of courses made on the websites, but it is rather a set of teaching and learning management processes, and thus the E-learning is based on computerized systems to manage learning processes, known as Learning Management System (LMS). Software designed to help management of all learning activities in educational institutions, implementation, and evaluation.

( [Http://www.elc.edu.sa/jusur/jusur\\_advanced.php](http://www.elc.edu.sa/jusur/jusur_advanced.php)).

The daily development in knowledge and technology requires searching for a new formulation of the teaching and learning processes contributing to keep a pace with educational institutions for innovation in technology, in order to use these technologies efficiently and effectively. Faculty members should make the best use of the latest available technology and to stay informed about the latest developments, and transfer what they have learned to new generations of students.

(Altun, A., Gulbahar, Y., Madran, O, 2008, p138 ).

Using technologies in delivering higher education courses represents a real challenge for faculty members to examine their culture of teaching (Travis & Price, 2005). As they should examine the effect of using this technology in all teaching processes and aspects (such as organizing course content, delivery of courses and delivery, evaluation ). Literature refers to the importance of learning environments comparing online learning environment and direct face to face one. (Fortune, et al., 2006); (Mooteram, 2006); (Anagnostopoulos, et al., 2005); (Joint, 2005); (Sauers & Walker, 2004), (Renée N. Jefferson, Liz W. Arnold, 2009).

With the development of the E-learning systems, the LMS have become reliable means in teaching and training, in the university or elsewhere, and are used in most universities around the world systems for managing E-learning, whether open source (Moodle), (Dokeos) or closed source, such as (Blackboard), (ATutor). Many Studies indicate that 90% of American universities offer programs through Learning Management Systems ( Jones, James G. ; Morales, Cesareo ; Knezek, Gerald A. , 2005, P219).

The LMS is an important tool for the development of curriculum design and management of students' learning and their motivation to learn (Özdamlı, Fezile, 2007, p1). Besides, teaching through the LMS achieves

effectiveness in the development of teaching practices and student learning development (Santos, Olga C.; Boticario, Jesus G., 2007, p1).

The LMS is also useful in the development of student assessment. (Riad , A. & El-Ghareeb H., 2008, p200). The LMS can manage all teaching and learning processes of registration, scheduling; checking availability of content, tracking the performance of the learner and issuing reports about it, facilitating communication among teachers and learners, through chats, discussion forums, E-mail, and post Files as well as assessment tests and questionnaires.

The LMS allows delivery of scientific material and keeps track of learning and testing, communication and registration processes and study schedules (Cavus, nadire, 2009, p248). So, it is seen as an integrated system for the management of the educational process, in whole or in part, via the Internet, and includes management courses and communication synchronous and asynchronous tools simultaneously, and manages tests, assignments and registration in courses and follow-up to the student.

Teaching through the LMS helps to achieve effectiveness in the development of both teaching practices and students' learning. (Santos, Olga C., Boticario, Jesus G, 2007, pp1-2). Using E-learning environment leads to great benefits in integration, interaction and feedback, affecting positively the attitudes of learners in E-learning environment than in normal learning environment. ( Jones, James G. ; Morales, Cesareo ; Knezek, Gerald A. , 2005, P219)

Using the LMS also affects positively the attitudes of the faculty members towards special-need students, the knowledge extent of faculty members about these students and the methods of dealing with them through a variety of teaching strategies. (.Pollock, Wayne M, 2009, p4)

The reports of (Ohio Learning Network Task force on the future of E-learning) indicate that learners are the main component of developing both teaching and learning through LMSs as they participate in taking responsibility for their learning, varying their creativity continuously; learning occurs in various times and in different behavioral, cognitive, and emotional aspects, and evaluation is done according to the real performance, and the teacher's role is limited in guidance and counseling without indoctrination, whereas technology plays an active role in the delivery of courses. (Ereny,Tom, 2004).

The LMS consists of two main components, the first is Learning Management System (LMS) and the second is Content Management System (LCMS). Where Learning Management System is shown in (Cavus, nadire, 2009) as in the following shape:

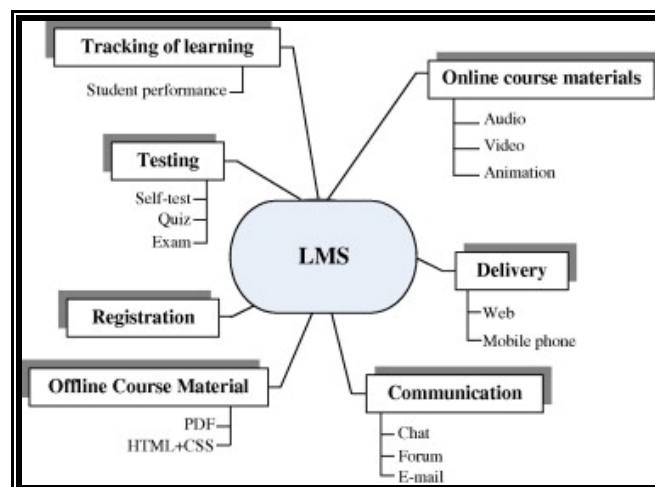


Fig (1) describes the structure of the Learning Management System (Cavus, nadire, 2009, p249)

**Content Management System:** A Content Management System (CMS) : Lurie (2002) refers to it as: The integration of three different concepts: content, processes, software and technology. The content includes texts, drawings, fixed drawings, animated images, sounds and videos, and media, arranged to become a flexible learning environment to be run by the user. Processes are defined as a range of activities with inputs and outputs

that allow the user to upload files, publish and share, and need software and technology to perform content control operations across the Internet.

(Altun, A., Gulbahar, Y., Madran, O, 2008) presents map Summarizes the content management system as follows:

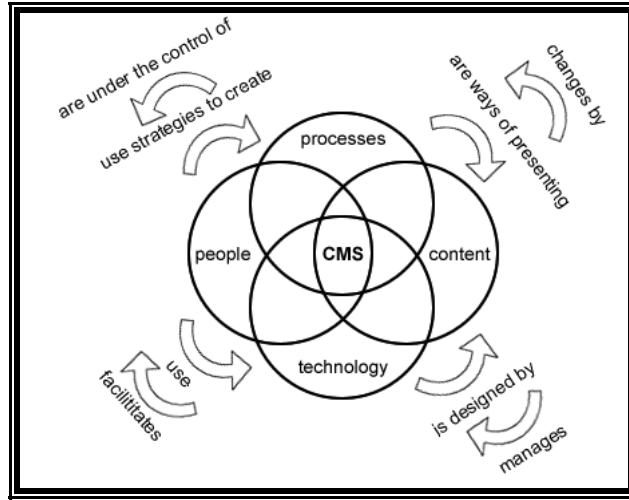


Fig (2)

Map work content management system  
(Altun, A., Gulbahar, Y., Madran, O, 2008, p139)

When selecting a specific system to be used in any institution as a LMS, there are certain procedures for this process including (Cavus, nadire, 2010):

- Selection and identification of user’s needs
- Choosing a range of products required by the user and fulfill his requirements
- Assessing the advantages and disadvantages of each product
- Sorting products in terms of advantages and disadvantages
- Determining the results and selecting the best suitable option for a user’s needs.

The following shape represents this system:

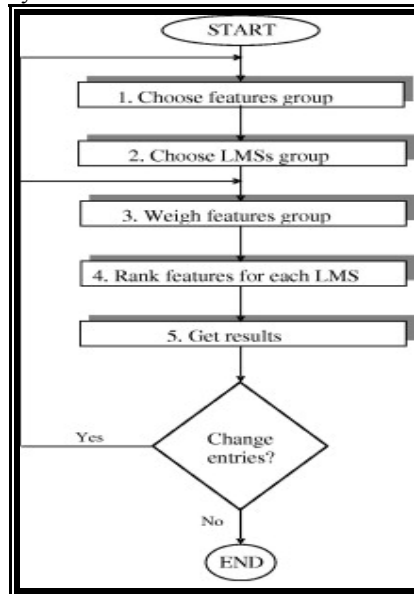


Fig (3)

Illustrates the procedures for selecting the Learning Management System  
(Cavus, nadire, 2010, p251)

The Saudi universities keep a pace with developments in the field of the LMS; as most of them have used LMS, whether open source or closed. For overcoming the diversity of these systems and addressing the problems of

development and technical support, the Ministry of Higher Education through the National Centre for E-learning and Distance Education in investigating of reality as well as international experiences. As a result, a national system for the management of E-learning called "JUSUR" has been established, in cooperation with international experts , avoiding the most common defects and problems in LMSs.

The National Center for E-learning and Distance Education has started training of Saudi universities faculty members to use the system and how to activate it in university teaching in Saudi universities. The number of courses offered by most Saudi universities on the system has reached (2336) courses in the first semester of the academic year 2009/2010.

### 1.1 Advantages of the JUSUR system:

JUSUR System is an integrated software system responsible for managing the E-learning process, including:

- Registration: inserting and managing of students' data.
- Scheduling: Scheduling of the courses, and developing plans to teach them.
- Delivering: Making content available to the students.
- Tracking: Following-up students' performance and producing reports.
- Communicating : facilitating communication among students through chats, discussion forums, mail, and post Files.
- Testing: conducting students' tests and dealing with their assessment.

Learner can, through their own page in JUSUR, access their grades and assignments. On the other hand, a teacher can build Tests and presenting them to students, and keeping degrees automatically in special tables, in addition to a number of other features and services the learner, the teacher, and management.

JUSUR System also includes Learning Content Management System (LCMS), the environment in which they can manage the stores of Learning Units / Learning Objects Learning Object Repository; and using them to develop educational materials. These systems have research capabilities that give developers the chance to search, access texts and media quickly for building learning content.

## 2. PREVIOUS STUDIES

Renée N. Jefferson, and Liz W. Arnold (2009) In his study, investigated the impact of virtual learning on academic culture, and indicated there is a difference between the perception of faculty members' facilities and obstacles in the E-learning environment and normal learning environment for the E-learning environment; as faculty members who work in learning environments and do not use E-learning believe that virtual education has significant obstacles and its facilities are very limited.

Altun, A., Gulbahar, Y., Madran, O (2008) investigate perceptions of pre-service teachers about using of a content management system for blended learning, researchers address stages of implementation and evaluating management system to be used in the higher education environment. The study aimed to note the interaction of university students within the system and how their perceptions of using of the system. The research group was composed of (65) university students volunteered to participate in the experiment; researchers used personal interviews and a questionnaire. Data was analyzed using metadata statistics; results showed students' interaction with using the content management system and that they are eager to using the system in their courses of study.

Cavus, N, Uzunboylu, H, Ibrahim, D (2006) investigates the effectiveness of using learning management systems and collaborative tools in web-based teaching of programming languages, indicated that using the LMS is more efficient and effective if it is equipped with a collaborative learning tool. The study also showed the success of the programming languages courses to achieve its objectives through the LMS and collaborative learning tool.

## 3. RESEARCH PROBLEM

Despite the technical capabilities offered by the National Centre for E-learning and Distance Education for faculty members to activate using JUSUR; it was noted that teaching through the system has not been activated adequately in most Saudi universities, including King Saud University although it is the most advanced university in using the system as (1283) course of the total (2336), (55%) of the courses, offered through the system. This requires identifying the reasons for this in terms of faculty members, and then to identify their attitudes towards using JUSUR for the management of E-learning and the reason for not activating the system adequately. The research questions are:

1. What are the attitudes of faculty members in Saudi universities towards using LMS - JUSUR?
2. What are the obstacles to use JUSUR from the viewpoint of faculty members in Saudi universities?

#### 4. RESEARCH PROCEDURES

##### 4. 1. Building the search tool:

Building attitudes scale of faculty members in Saudi universities towards using JUSUR learning Management System through considering several attitude scales of the E-learning Management Systems, at the Arab and global levels. Based on reviewing the theoretical framework of research and previous scales, the following scale axes have been identified:

- The personal view towards E-learning and JUSUR
- The need to use JUSUR
- The need for training on using JUSUR

##### 4. 2. Reliability and Validity of the Scale:

Validity was calculated to the scale through a group of specialists in measurement, evaluation, teaching methods, curricula, and Educational psychology numbered (15) faculty members. Their amendments requested have been modified. The scale in its final form is composed of (34) items and in addition two probe statements. Thus, the scale has (36) items. The responses graded according to five categories (Strongly agree - agree - neutral - refuse - strongly refuse).

The scale has been applied on an exploratory sample from (20) subjects, to calculate reliability and validity of the scale. Internal consistency was calculated through the calculation of correlation of each item with the axis to which it belongs and correlation among axes, the result were as in the following table:

(Table 1) shows the Internal Consistency of the scale in terms of the three axes  
Personal View, the Need to Use, the Need for Training

Spearman's rho		The first dimension	Spearman's rho		The second dimension	Spearman's rho		The third dimension
v1	Correlation Coefficient	.835 (**)	v2	Correlation Coefficient	.873 (**)	v3	Correlation Coefficient	.741 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
v4	Correlation Coefficient	.835 (**)	v15	Correlation Coefficient	.856 (**)	v6	Correlation Coefficient	.806 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
v5	Correlation Coefficient	.816 (**)	v18	Correlation Coefficient	.821 (**)	v9	Correlation Coefficient	.799 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
v7	Correlation Coefficient	-.362 (*)	v19	Correlation Coefficient	.756 (**)	v12	Correlation Coefficient	.362 (*)
	Sig. (2-tailed)	.022		Sig. (2-tailed)	.000		Sig. (2-tailed)	.022
v8	Correlation Coefficient	.760 (**)	v20	Correlation Coefficient	.726 (**)	v14	Correlation Coefficient	.807 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
V10	Correlation Coefficient	.740 (**)	v27	Correlation Coefficient	.886 (**)	v21	Correlation Coefficient	.888 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
V11	Correlation Coefficient	.799 (**)	v30	Correlation Coefficient	.713 (**)	v22	Correlation Coefficient	.877 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
V13	Correlation Coefficient	.720 (**)	v33	Correlation Coefficient	.715 (**)	v23	Correlation Coefficient	.892 (**)
	Sig. (2-tailed)	.000		Sig. (2-tailed)	.000		Sig. (2-tailed)	.000
V16	Correlation Coefficient	.715 (**)				v24	Correlation Coefficient	.880 (**)
	Sig. (2-tailed)	.000					Sig. (2-tailed)	.000
V17	Correlation Coefficient	.841 (**)				v25	Correlation Coefficient	.849 (**)
	Sig. (2-tailed)	.000					Sig. (2-tailed)	.000
V26	Correlation Coefficient	.870 (**)				v28	Correlation Coefficient	.860 (**)
	Sig. (2-tailed)	.000					Sig. (2-tailed)	.000
V31	Correlation Coefficient	.628 (**)				v29	Correlation Coefficient	.821 (**)
	Sig. (2-tailed)	.000					Sig. (2-tailed)	.000

V32	Correlation Coefficient	.805 (**)				
	Sig. (2-tailed)	.000				
V34	Correlation Coefficient	.551 (**)				
	Sig. (2-tailed)	.000				

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

(Table 2) shows the internal consistency of the scale of the axes as a whole

Spearman's rho		The first dimension	The second dimension	The third dimension
The first dimension	Correlation Coefficient			
	Sig. (2-tailed)			
The second dimension	Correlation Coefficient	.929 (**)		
	Sig. (2-tailed)	.000		
The third dimension	Correlation Coefficient	.717 (**)	.719 (**)	
	Sig. (2-tailed)	.000	.000	
Direction as a whole	Correlation Coefficient	.931 (**)	.903 (**)	.908 (**)
	Sig. (2-tailed)	.000	.000	.000

#### 4. 3. Calculation of Reliability:

Reliability was calculated using Cronbach reliability coefficient; the coefficient was (0.972), it's an appropriate reliability coefficient to trust the reliability of the scale for application.

### 5. RESULTS

#### 5. 1 General Results:

After identifying faculty members using JUSUR by the system management at the National Center for E-learning and Distance Education, the scale has been prepared electronically and sent to them through a link via E-mail registered on the system. The completed responses were (94); (4) responses of which were excluded for not answering the items of scale validity, bringing the final total number of respondents to (90), the following table showing their distribution:

(Table 3) shows the Distribution of Faculty Research Group according to the University

The Universities	Number	Percentage
King Saud University	40	44%
Umm Al Qura University	16	18%
Taibah University	16	18%
Qassim University	8	9%
Princess Nora University	6	6.5%
Jazan University	4	4.5%
Total	90	100%

(Table 4) shows the Distribution of Faculty Research Group according to the Colleges Classification

The nature of the colleges	Number	Percentage
Humanities Faculties	40	45%
Science colleges	38	42%
Medical Colleges	12	13%

From the previous table it is clear that most participants are from the humanities faculties, followed by colleges of science and at the participants from health colleges.

5. 1.1. The Distribution of the Research Group according to their scientific ranking is illustrated in the following table:

(Table 5) shows the Distribution of the Research Group according to scientific ranking

Academic Rank	code	Number	Percent
Professor	1	14	15.5%
Associate Professor	2	10	11.5%
Assistant Professor	3	38	42%
Lecturer	4	16	17.7%
Demonstrator	5	12	13.3%
Total		90	100%

5. 1. 2. Distribution of the research group according to gender:

(Table 6) shows the distribution of the research group according to Gender

	Males	Female
Number	50	40
Percentage	55%	45%

5. 2. The results of measuring attitudes of faculty members

Where the total scale items are (34), then the final score of any participant is (170) degrees. Statistical coefficients of the scale were calculated to determine the attitudes of faculty members to use JUSUR; they are shown in the following table:

Table (7) shows the Attitudes of faculty members

	The first axis	The second axis	The third axis	Attitude in general
Average	61.03	33.48	48.48	142.98
Standard deviation	8.541	6.131	11.291	23.563
Variance	72.948	37.589	127.487	555.204
Rang	29	22	43	94

The previous table shows that faculty members revealed positive attitudes towards using JUSUR in general terms as the average degree of the group in the scale represents (84.1%) of the total scores. At the axes level, questionnaire results indicated there are positive attitudes of the faculty members towards using JUSUR in the first axis, representing the highest rate (86.5%), followed by the second axis (83.7%) and finally by the third axis (81.3%)

5. 2. 1 Differences in Attitudes according to gender:

Table (8) shows the differences in attitudes according to gender

Type	Sum of Squares	Mean Square	F	Sig.	
The first dimension	Between Groups	67.204	67.204	.919	.344
	Within Groups	2777.771	73.099		
	Total	2844.975			
The second dimension	Between Groups	85.204	85.204	2.345	.134
	Within Groups	1380.771	36.336		
	Total	1465.975			
The third dimension	Between Groups	.038	.038	.000	.987
	Within Groups	4971.938	130.840		
	Total	4971.975			
Direction as a whole	Between Groups	310.537	310.537	.553	.462

	Within Groups	21342.438	561.643		
	Total	21652.975			

The previous table shows that there are no differences at statistical significance level (0.05) due to gender between males and females.

### 5. 2. 2. Differences in attitudes according to scientific ranking

Table (9) shows the differences in attitudes according to scientific ranking

Academic Rank		Sum of Squares	Mean Square	F	Sig.
The first dimension	Between Groups	720.196	240.065	4.067	.014
	Within Groups	2124.779	59.022		
	Total	2844.975			
The second dimension	Between Groups	548.003	182.668	7.164	.001
	Within Groups	917.972	25.499		
	Total	1465.975			
The third dimension	Between Groups	525.352	175.117	1.418	.253
	Within Groups	4446.623	123.517		
	Total	4971.975			
Direction as a whole	Between Groups	5339.231	1779.744	3.927	.016
	Within Groups	16313.744	453.160		
	Total	21652.975			

The previous table indicates that there is a statistically significant differences at the level of (0.05) among faculty members due to their scientific ranking; in the first dimension for professors, associate professors and assistant professors respectively, as well as in the second dimension and in the attitudes in general.

### 5. 2. 3. Differences in attitudes according to College Classification

Table No. (10) illustrates the Differences in attitudes according to the college classification

The nature of the College		Sum of Squares	Mean Square	F	Sig.
The first dimension	Between Groups	175.693	87.847	1.218	.308
	Within Groups	2669.282	72.143		
	Total	2844.975			
The second dimension	Between Groups	88.304	44.152	1.186	.317
	Within Groups	1377.671	37.234		
	Total	1465.975			
The third dimension	Between Groups	701.593	350.797	3.039	.060
	Within Groups	4270.382	115.416		
	Total	4971.975			
sum	Between Groups	2404.995	1202.498	2.312	.113
	Within Groups	19247.980	520.216		
	Total	21652.975			

From the above table, it appears that there are no differences of statistical significance level (0.05) in the attitudes of faculty members towards using JUSUR due to the college classification, whether they are humanities, scientific or health colleges.

## 6. DISCUSSION

Based on the results of applying the scale, it is clear that faculty members in Saudi universities have positive attitudes towards using JUSUR, the E-learning Management System in general and in the three axes: first, the



second and the third, respectively; and that there are differences in the attitudes due to the college classification type, whether humanities, scientific and health college, where faculty members work or the nature of their work.

The results indicated the existence of statistically significant differences at the level (0.05) in the attitudes towards using JUSUR due to the scientific ranking for the category of professors, associate professors and assistant professors in their attitudes in general and in the first and second axes.

These results indicate that the faculty members using JUSUR have sufficient awareness of the importance of the E-learning and using technology in teaching; which represents a very encouraging sign for the development among faculty members in the area of using EMS. It is optimistic that the professors were the highest category having positive attitudes towards using the EMS.

These results are consistent with other studies including: (Fortune, et al., 2006); (Mooteram, 2006); (Anagnostopoulos, et al., 2005); (Joint, 2005) (Renée N. Jefferson, Liz W. Arnold, 2009) (Özdamli, Fezile, 2007) . (Santos, Olga C.; Boticario, Jesus G., 2007); (Riad, A. & El-Ghareeb H., 2008); (Pollock, Wayne M, 2009); (Sauers & Walker, 2004) that have indicated the effectiveness of using the LMS in developing the capabilities and skills of the learners as well as enriching the environment within the learning communities.

Despite these positive attitudes of faculty members, it is noted weakness of activating the system adequately; the faculty research participants have attributed this for the following reasons:

#### **Physical constraints:**

- Infrastructure that does not support E-learning processes within the college;
- The lack of some students to computer sets or/and internet service connection;
- The relatively high cost of Internet connection compared to some other Arab countries;
- The absence of direct technical support to both faculty members and students before and during using the system.

#### **Personal constraints:**

- Concerns of some faculty members and students' families about technology;
- Community resistance to the E-learning processes considering them a sort of luxury or fun, but not learning;
- Lack of awareness regarding the bases of using the system;
- Weak awareness of the importance of the system from the side of some department heads and their refusal to activate it;
- Lack of persuasion of the faculty members regarding the E-learning and considering it as a fashion.

#### **Administrative constraints:**

- Lack of adequate support from the Scientific Section
- Strong resistance of some faculty members for any change or development in the academic departments, feeling threatened regarding their gained positions for the benefits of others with good knowledge of technology.

## **7. RECOMMENDATIONS AND PROPOSALS**

In the light of results of research and proposals of faculty research group, the researcher recommends the necessity of activating the EMS in teaching, with special focus on JUSUR for its advantages, through:

- Building the culture of E-learning;
- Building learning objects and units of science and supporting research;
- Building and developing of learning objects Editing Systems;
- Developing and freeing JUSUR of the strict centralization;
- Training all faculty members and students in each semester;
- Freeing JUSUR from the extreme centralization regarding student registration and account management;
- Requiring students attended a training program on e-learning management systems;
- Developing the efficiency of the computer labs and providing students' Internet labs;
- Allocating technical support at the same centers to resolve problems directly with students;
- Activating of incentives for faculty members for using the E-learning.

## 8. THE PROPOSED RESEARCH:

- Effectiveness of teaching through JUSUR in developing students' skills and attitudes towards learning and their future professionals.
- Students' attitudes towards JUSUR.
- Attitudes of faculty members in different universities or in all the universities within the Kingdom as a whole.

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