



## UNDERSTANDING OF MIS SPECIALTY IN JORDAN: EMPIRICAL INVESTIGATION FROM STUDENTS' PERSPECTIVE

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### Abstract

The Management Information Systems (MIS) specialty plays a crucial role in the management and application of information technology and information systems in organizations. Consequently, there is an increasing demand for qualified graduates in the MIS specialty. However, there is a lack of the understanding of the MIS specialty among the Jordanian students. Therefore, the aim of this study is to examine the factors affecting students' understanding of MIS specialty in the Jordanian universities. The study followed quantitative research approach which is survey-based using a questionnaire. Around 250 questionnaires were distributed randomly to MIS students at the private universities in northern region in Jordan and 194 valid questionnaires were received. Multiple regression technique was deployed for the data analysis. The results revealed that the students' capabilities, the students' beliefs, and the students' expectations were significantly influencing the students' understanding of MIS specialty. Moreover, the results indicated that the developed model explains 40.5% of the variance in the students' understanding of MIS specialty. Practically, students understanding of the MIS will enable them to market the specialty in Jordanian market.

## 1. INTRODUCTION

The specialty of Management Information Systems (MIS) is considered as one of the rising majors on the modern business market, where there barley no university or college in Jordan without a department to teach this major. MIS field is one of the most exciting areas of study in schools of business in the current era of continues change in technology, management, and business processes (Loudon & Loudon, 2015). In addition, Kroenke (2007) mentioned that MIS has three key elements including: development and use, information systems, and business goals and objectives.

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The MIS specialty was introduced in universities to deliver qualified graduates who able to enhance the technological development and application in organizations. Once graduated students of MIS specialty understand it, realize its importance, and master its application, they will become very beneficial for organizations. They will affect the business environment and turn it to a productive, educational and flexible environment. However, there is a lack of understanding of the MIS specialty among the students in the Jordanian universities. The researchers have noticed that there is a limited understanding of the MIS specialty. Students are complaining about the MIS specialty, about its benefits, and about the job opportunities that they may have after graduation. The vast majority of MIS graduates are hired as clerical workers or data entry employees in the Jordanian market place. Apparently, there is a joint misunderstanding of MIS specialty by MIS graduates and firms administrations. In addition, MIS graduates are unable to market themselves in the market place due to the lack of perception and understanding of the specialty. Therefore, the aim of this paper is to identify and examine the factors that may influence the students' understanding of MIS specialty in the Jordanian universities.

This study is consistent with its purpose and organized as the following. The second section introduces a brief review of literature on MIS definition and importance. Next, a theoretical model is advanced based on the researchers' investigations with three constructs and the research hypotheses are proposed. The paper will then state the study's methodology to empirically examine the relationship between the constructs. Subsequently, the results of the study along with the discussions of the results are presented. The last section includes the research conclusion and recommendations for future research.

## **2. OVERVIEW OF MANAGEMENT INFORMATION SYSTEMS (MIS)**

MIS is a field in Information Technology (IT) which provides comprehensive and integrative coverage of essential new technologies, information system applications, and their impact on business models and managerial decision making. It has been defined by many researchers. Among the definitions, [Ives et al. \(1980\)](#) defined MIS as a "computer-based organisational information system which provides information support for management activities and functions". Another definition is provided by [Ein-Dor and Segev \(1978\)](#) who stated that "MIS is a system for collecting, sorting, retrieving and processing information which is used, or desired, by one of more managers, in the performance of their duties". Moreover, MIS can be considered as the type of information system that supports the tactical decision-making of managers, and also monitors the current state of the organization ([Davies, 2009](#)). Based on the above definitions, the specialty of MIS should cover all these aspects within the MIS curriculums provided to the students. Moreover, the understanding of MIS specialty needs to be based on these aspects as well.

The MIS specialty plays essential roles in the modern organizations and in internet-era businesses. The implementation of MIS systems will be a useful tool for making business decisions depending on the gathered data and information from these systems ([Asemi et al., 2011](#)). The same role is shared by [Das \(2012\)](#) who stated that the main concern of MIS is with processing data into information for appropriate decision making. Earlier, [Beaumaster \(2002\)](#) pointed out that MIS concentrate on the automation of many business activities that aim to provide better methods of planning, reporting, and operation control. Furthermore, important factors for the efficiency of MIS were introduced by [Kornkaew \(2012\)](#) as the main characteristics of MIS which are; to have reports developed and implemented using information system personnel, including systems analysts and computer programmers; to require formal requests from user; and to produce scheduled and demanded reports. In addition, [Kelkar \(2009\)](#) indicated that MIS specialty enables organizations to face competitive forces of globalization of industry, enlarged scope of business, enlarged geographic spread, and more demanding customers.

In Jordan, the MIS specialty has been introduced in universities in 2000. Meanwhile, there was a lack of specialized faculty members in the MIS specialty. Faculty members from both the college of business and the college of information technology were teaching the students in the MIS department. They were teaching the MIS specialty from their background perspective; business or information technology. This has influenced negatively on the understanding and maturity of it. Over the years, specialized faculty members has become teaching the MIS specialty. They have contributed in building a better environment for teaching and understanding the MIS specialty.

### 3. RESEARCH MODEL AND HYPOTHESES

As there is an increasing interest in the MIS specialty among the Jordanian students, these students have to acquire better understanding of the main pillars and facets of the specialty. The researchers have noticed a huge gap between the reality of the MIS specialty and the level of understanding of the students in Jordanian universities. Therefore, this study tried to find the main factors of understanding MIS specialty in the Jordanian context.

The researchers suggest that the understanding of MIS specialty among the students of the Jordanian universities could be explained through a set of factors. These factors include students' capabilities, students' beliefs, and students' expectations. The first factor is the students' capabilities which refer to the level of knowledge in MIS field. The students' beliefs refer to students' perspectives toward the educational tools, the educational environment, the materials contents, the continuous improvement, and the academic staff. The last factor is the students' expectations which refer to the students' expectations regarding; the future of the MIS specialty, the understanding of MIS specialty by the owners or managers of organizations and the market need for the MIS specialty. On the other hand, the understanding of the MIS specialty refers to the students' understanding of the main concepts, pillars, facets, and fields of the MIS specialty.

Figure 1 illustrates the research model in relation with this study. Three hypotheses have been proposed, H1: students' capabilities will positively influence the understanding of MIS specialty; H2: students' beliefs will positively influence the understanding of MIS specialty; H3: students' expectations will positively influence the understanding of MIS specialty.

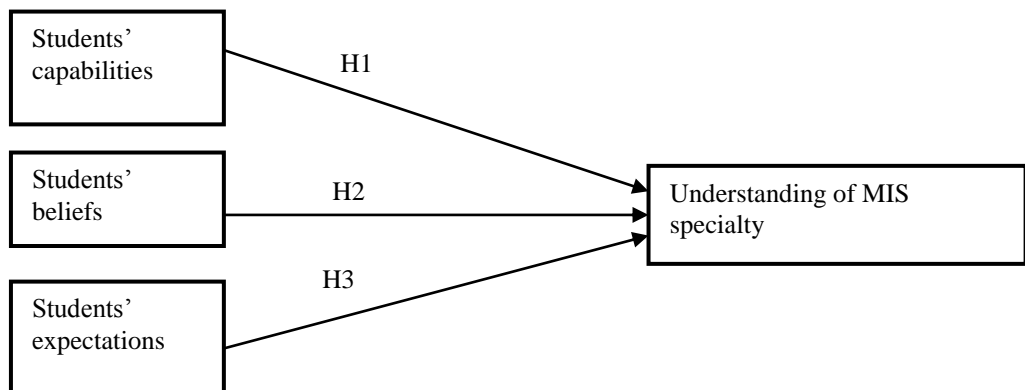


Figure 1: Research model

### 4. RESEARCH METHODOLOGY

This study utilized quantitative approach. Quantitative research can be used to describe current conditions, investigate relationships, and correlations between variables (Gay *et al.*, 2006). As the research investigates the influence of a set of dependent factors on an independent factor, a quantitative approach was followed. The quantitative approach in this study is survey-based

type. It is a cross-sectional field study in which the researcher collects the data at one point in time (Creswell, 2008).

The population of the study includes MIS undergraduate students in private universities in Jordan. In order to define the sample of the study an area sampling method was deployed. Area sampling is used when the population could be divided into identifiable geographical areas (Sekaran, 2003). Jordan can be divided into three geographical areas or regions; the northern, the middle, and the southern. The northern region is selected to conduct this study which includes four universities; Jadara, Jarash, Irbid, and Ajloun. Specifically, the target population of this study is the MIS undergraduate students in these Universities. Based on the directory of the admission and registration department in these Universities at the beginning of the second semester 2014, the total number of MIS undergraduate students in these universities was 523. According to Sekaran (2003), with a population size of 500 units, the sample size must be a minimum of 217 units. Therefore, for the purpose of this study the sample size was 250.

Self-administered questionnaire was developed to collect the data. The questionnaire consists of five sections. The first section was regarding the general information of the respondents including academic year, gender, educational attainment, and second secondary school field. Sections two, three, and four consisted of 5 questions each to measure accordingly students' capabilities, students' beliefs, and students' expectations. The last section consisted of 6 questions to measure the students' understanding of the MIS specialty. The questionnaire was reviewed and evaluated by six experts (academic staff) in information technology and business administrations. Consequently, it was modified based on their suggestions and recommendations.

A pilot study was conducted to determine the reliability of the questionnaire and to make sure it does not contain mistakes or any confusing expressions. The Cronbach's Alpha was used to test the reliability of the research instrument in which the values were greater than 0.6 indicating an acceptable level of reliability. After revising the questionnaire based on the pilot study, the questionnaire was distributed to the study sample by the researchers. About 250 questionnaires were distributed. Out of this number, 208 questionnaires were returned. Only 194 questionnaires were valid for the subsequent analysis, giving a response rate of 77%.

## 5. RESULTS AND DISCUSSIONS

### 5.1. The sample characteristics

The characteristics of the research sample include the level of study, gender, and the student speciality in the second secondary school. The results of the sample characteristics analysis are summarized in Table 1 below.

**Table 1: Sample characteristics**

Level of study	Frequency	Percentage
First year	5	2.6
Second year	27	13.9
Third year	69	35.6
Fourth year	93	47.9
Total	194	100.0
Gender	Frequency	Percentage
Male	89	46.0
Female	105	54.0
Total	194	100.0
Student speciality	Frequency	Percentage
Information management	56	28.9
Scientific	51	26.3
Literary	65	33.5

Hospitality	3	1.5
Industrial	13	6.7
Religious	2	1.0
Agricultural	4	2.1
Total	194	100.0

Based on the information in Table 1, the descriptive statistics showed that 2.6% of the respondents were in the first year of their study, 13.9 were in their second year, 35.6 were in their third year, and 47.9 were in their fourth year. The results show that 46% of the respondents were males while 54% were females. Regarding the students' speciality in the second secondary school, the students belong to different specialties for example, 28.9% were in the information management specialty, 26.3% were in the scientific specialty, and 33.5% were in the literary specialty.

## 5.2. Reliability

For testing the reliability of the questionnaire using the real data, the Cronbach's Alpha was used. The value of Cronbach's Alpha should be more than 0.6 to indicate an acceptable level of reliability (Hair *et al.*, 2006). The results show an acceptable level of reliability where the values of Cronbach's Alpha for all the constructs were greater than 0.6 as shown in Table 2.

**Table 2: The reliability results**

Variable	Cronbach's alpha	N of items
Students' capabilities	0.83	5
Students' beliefs	0.85	5
Students' expectations	0.81	5
Understanding of MIS specialty	0.88	6

## 5.3. Correlation analysis

The Pearson's correlation was used to explain the strength and direction of a linear relationship between two variables (Pallant, 2007). Table 3 shows the results of the correlation coefficients (R) of all the research variables. The correlation between the dependent and independent variables is important to exist and preferred to be more than 0.3 (Pallant, 2007). The values are greater than 0.3 for the constructs.

**Table 3: Pearson's correlation**

Correlations				
	Students' capabilities	Students' beliefs	Students' expectations	Understanding of MIS specialty
Students' capabilities	1			
Students' beliefs	0.183*	1		
Students' expectations	0.464**	0.199**	1	
Understanding of MIS Specialty	0.502**	0.365**	0.506**	1

\*. Correlation is significant at the 0.05 level (2-tailed) \*\*. Correlation is significant at the 0.01 level (2-tailed)

## 5.4. Regression analysis

Multiple Regression Analysis was undertaken to determine the effect of students' capabilities, students' beliefs, and students' expectations on the understanding of MIS specialty. In order to make sure that the data were suitable for the regression analysis, the statistical assumptions of sample size, multicollinearity and singularity, outliers, normality, linearity, and homoscedasticity tests were carried out. All the assumptions were successfully met. Table 4 and Table 5 show the results of the regression analysis.

**Table 4: Multiple regression analysis**

R	R square	Adjusted R square	Std. Error of the estimate	F value	Sig (P value)
0.636	0.405	0.395	0.473	43.049	0.000 <sup>a</sup>

a. Predictors: (Constant), students' capabilities, students' beliefs, students' expectations.

b. Dependent Variable: Understanding of MIS specialty

**Table 5: Coefficients of multiple regression analysis**

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. error	Beta		
(Constant)	0.930	0.276		3.369	0.001
Students' capabilities	0.347	0.071	0.312	4.913	0.000
Students' beliefs	0.204	0.048	0.246	4.281	0.000
Students' expectations	0.263	0.054	0.312	4.902	0.000

a. Dependent Variable: Understanding of MIS specialty

The results in table 6 show that the students' capabilities, the students' beliefs, and the students' expectations explain 40.5% of the students' understanding of MIS specialty. The F Value is equal to (43.049) and hence is significant at ( $p \leq 0.05$ ) and this assures that there is an influence of the independent variables on the dependent one. The findings in table 7 indicate that students' capabilities ( $\beta=0.312$ ,  $p \leq 0.000$ ), students' beliefs ( $\beta=0.246$ ,  $p \leq 0.000$ ), and students' expectations ( $\beta=0.312$ ,  $p \leq 0.000$ ) are significantly and positively influencing the students' understanding of MIS specialty. Thus, H1, H2, and H3 are supported.

The research has shown that the students' capabilities, the students' beliefs, and the students' expectations have positive significant relationships with the students' understanding of MIS specialty. Therefore, decision makers in the ministry of higher education and also in the universities should work on enhancing the understanding of the MIS specialty among students and organizations. Specifically, they have to provide a clear identification for its goals, benefits, and roles in improving the efficiency and effectiveness of work in the organizations. Making specialized seminars and conferences could be used to enhance the understanding of MIS specialty. Hence, once students understand the MIS specialty and its importance, they will be able to market the specialty in the market place. Moreover, they will be able to convince the administrations of organization to include the specialty within their jobs classifications.

## 6. CONCLUSION AND FUTURE WORK

This study has indicated that there is a lack of understanding of the MIS specialty among the Jordanian students. In conjunction, the main factors of understanding MIS specialty in the Jordanian context have not been investigated yet. Three factors were identified as potential factors that may influence the students' understanding of the MIS specialty in the Jordanian universities. The study followed a quantitative research methodology using a questionnaire to investigate the influence of these factors. The questionnaires were distributed to and retrieved from the study respondents personally by the researchers. The collected data was analysed using Multiple Regression Analysis to examine the research hypotheses. The results showed that there was a positive significant influence of the students' capabilities, the students' beliefs, and the students' expectations on the students' understanding of MIS specialty.

In the future, there is a need for further research on developing and proposing a job description for the graduates in the MIS specialty. Such job description could help both the students and the organization to better understand the MIS specialty. Furthermore, additional factors could be included in the research model to build deeper understanding of the MIS specialty.

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