An Investigation into Student Satisfaction:
A Field Study at Al-Zaytoonah University

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Abstract

The purpose of this study is to determine the effect of Website quality of Al Zaytoonah university of Jordan on its student satisfaction. Eight Website quality dimensions: (the website customization, interactivity, care, cultivation, convenience, selection, special characters, and community) were chosen based on a related literature review. In consistence with these dimensions, the hypotheses of the study were formulated in a causal model, and then they were tested to determine the effect of Website quality dimensions on student satisfaction. A random sample of 250 students was withdrawn from the entire population of 7,250 enrolled students for 2017-2018 academic year. The statistical analysis results have approved the study hypotheses and confirmed that there is a significant positive impact of the web site quality dimensions collectively and individually on the university student's satisfaction. The highest level of student satisfaction mainly related to four Web site quality dimensions, of convenience, choices diversification; providing services, and social communication.

Key terms: website quality, Website customization, interactivity, care, cultivation, convenience, selection, special characters, and community

1. Introduction
The telecommunication technology revolution has changed the rules of the business game locally and internationally. It changes the nature of tools, ways, dimensions, and speed of business organizations transaction process. This revolution also was behind the emergence of the electronic-oriented means of completion. This development has obligated business organization to make essential changes in their organizational structures as well as in their means of completions as they turn toward an extensive use of network facilities and other electronic means. (Abu Hasan, F.H. (2008), (Applegate, & Daly, 2005), (Avenarius, 1993), (Barry & Schuncany 1982)

Private universities are highly concerned about these dramatical changes due to the nature and types of services they are offering in addition to the characteristics of their customers as knowledge-customers. The most dominating factor in this transformation process is the university website as it becomes an effective mean for competition and customer (student) satisfaction. The roles of university website as a mean for attracting and satisfying students, has increasingly become critical for sustainable improvement of the university competitive advantage. Therefore an effective and attractive university website must be characterized by a distinctive design, shape, attracting, quality of services, diversity, efficiency, effectiveness, responsiveness and updating to meet student's needs and wants.

(Alves & Raposo 2010), (Ngnyen & Leblanc 1998),(Barich & Kottlor 1991),(Gray & Blamer 1998), (Movondo et al 2004), (Thomas & Galambos 2004) , (Orpen 1990), (Schnbert-lrastorza & Fabry 2011).

2. Literature Review

A survey of the related literature was conducted to precisely identify and accurately define all terms, concepts, components and dimensions used in this study specially those related to university website components and student satisfaction elements.

Higher education service has become one of the key drives in the economic growth process nationally and globally. University students, nowadays, are regarded as customers not as learners. This plainly means those universities as private organizations must maintain satisfying their customers (students) to ensure sustainable expansion and enrolment of new students. (Galambo، 2004). The customers of the higher education sector could be characterized as knowledge customers due to their level of education and the type of services they are looking for. This fact urged higher education institutions to continue improving their offered services. (Orpen 1990) (Barto 1978) (Seldin 1993)، (Benjamin & jay 2005)، (Tucciaroue 2009). To develop and implement a relevant and effective strategy for services improvement universities need to assess and measure the level of their student's satisfaction to be able to setup their priorities for service-enhancement program. (Wiers-Jenssen et al 2002). University website service is one of the most important services that a university provides because it is portraying the image of the university on the net, and ensuring an easy official contact with its customers (students). This study focuses on the role of the university website service as a mean for student satisfaction. (Barry & Schuncany 1982), (Bedggood& Donvan 2012) (Benjamin& Holings 1997), (Browne, Kaldenberg, Browne, & Brown 1998)

3. Al-Zaytoonah University Profile

Al-Zaytoonah University is a Jordanian private university founded in 1993 comprises 8 faculties with a total of more than7000 enrolled students. The university colleges are offering 25 bachelor programs plus 5 master programs implemented by 437 teaching staff member aided by 700 employees. Al-Zaytoonah University is operating in a highly competitive environment as it is competing with other 8 universities within Amman area. A considerable percentage (13%) of the university students are from neighboring Arab countries, which makes the university website service very essential because it is the most practical mean for the university to communicate effectively with its foreigner students.

4. Website Concept

It might be necessary to determine a conceptual frame work for the term website based on very precise definitions. These are the most commonly used dictionary definition of the (website) term:

- It is a connected group of pages on the world web regarded as a single entity usually maintained by one person or organization and devoted to a single topic or several closely related topics.
- It is a group of connected pages on the World Wide Web containing information on a particular subject. (Avenarius 1993), (Barich & Kottler (1991), (Benjamin, Blair, Lee, day 2005), (Korgaonkar & Wolin 2002), (Schuler 2004)

5. Website Quality Components

The related literature is highly diversified in terms of division and classification of website components, but despite this disagreement, the most commonly used component of website quality can be summarized as follow:

- Front end elements. It is what you see while back end is what you don't.
- The navigation structure. It is the order of the pages, and the collection of what links to what.
- The page layout. This is the way things appear on the page.
- Logo. It includes photos, graphics, navigation bars, lines and flourishes that placed on a website to bring it to life.
- Content management system. A robust management system allows for documents to be prepared, edited, approved and attracted prior to publication. Some other classification of website quality dimensions include, customization, interactivity, core, cultivation, convince, selections, characters and community which were adopted by this study because they are widely covering the concept of website quality dimension. (Benjamin & day 2005), (Tuciarone, 2009), (Korgcmkar & Lori 2002) and (Emmanouilides & Kathy 2000).

6. Student Satisfaction

Higher education service sector market has become increasingly competitive due to essential transformational process that was take place during the last few decades. Therefore universities need to build their own competitive advantage based on student satisfaction. (Thomas & Galambos 2004). (Opern 1990). Maintain and improving student satisfaction by higher education intuitions has become a vital and important objective to ensure the effectiveness of these intuitions. (Barton, 1978)، (Seldin, 1993) and (Wiers-Jenssen, Stensaker &Grogaard 2002). There are many psychosocial dynamics theories that explaining student satisfaction such as "the happy-productive" student theory. (Cotton et al 2002). (Cronin& Taylor 1992), (Elliot& Healy 2001), (Elliot& Shin2002), (Green 1994).This theory suggests that student satisfaction is mediated by many psychosocial factors.

The second theory of student satisfaction is the "investment mode" which explains the relationship between student satisfaction, attrition and academic performance (Hatcher et al 1992), (Sureschandar et al 2002), (Teo and Thompson 2001).

The third theory considers student satisfaction as a function of the extent to which student expectations are met leading to higher levels of satisfaction .(Churehill & Suprenant, 1982), (Pervin 1967), (Shanket al 1995), (Sultan and Wong 2012).

The related literature is highly diversified classification about student satisfactions elements as it has stated a total of 53 factors or components that affect student satisfaction , one of which is the university website quality as it represents the outside official window for communicating with a university and making the primary impression about it and that will be the main focus of this study . (Khodayari & Khodayri 2011), (Klein 2002), (Oliver 1997) ,(Pervin 1967) .

This study aims at conducting an investigation into the relationship between the university website quality components and its competitiveness capacity, to determine the impact (if any) of these components on the university student's satisfaction individually and collectively. (Harvey and Green 1993) , (Hatcher et al 1992) , (Johnson and Winchell 1988) , (Joseph et al 2005).

7. Methodology
7.1 Research Design & Data Collection

A multiphase study was designed and adopted, starting with an exploratory review of the related literature to clearly and precisely define the university website, determining its dimensions and highlighting the term students satisfaction as both of them represent the main variables of the study. This phase was followed by internet navigation where 30 university websites were visited to compare what is theoretically formulated with what is actually operational.

The third stage was a conclusive quantitative survey aiming at collecting the required data to measure the variables of the study. The questionnaire has become the most relevant tool for data collection in such type of studies. Therefore a questionnaire was designed, its statements was

formulated, reviewed by group of academic referees and then modified and used. The data was collected through a direct contact with a sample of Al-Zaytoonah University students.

7.2 Sample Description

A sample of 250 students was randomly withdrawn from a population of 7250 student enrolled at Al-Zaytoonah university 7 faculties for the fall semester 2017 / 2018 academic year .The characteristics of the sample are shown by table (1). As it is illustrated by this table the study sample has comprised all the faculties' students and fairly represents them by gender and by the academic year at the university.

Table 1: Characteristics of the study sample

Characteristics		Frequencies	%
Gender	Male	130	54.9
	Female	107	45.1
	Total	**237**	**100**
academic year	First	38	16/0
	Second	49	20.7
	Third	65	27.4
	Fourth	83	35.0
	Fifth	2	0.08
	Total	**237**	**100**
Faculty	Pharmacy	11	4.6
	Nursing	30	12.7
	Sciences	42	17.7
	Business	126	53.2
	Literature	13	5.5
	Law	6	2.5
	Engineering	9	3.8
	Total	**237**	**100**

7.3 Formulation of the Study Hypotheses

The hypotheses of this study are subedited relying upon the aims and variables of the study. They are the followings:

H.1: There is a statistically significant impact of Al-Zaytoonah university website quality on the satisfaction of its students. According to the selected website dimensions, this hypothesis was broken down into eight sub-hypotheses as follows:

H.1.1: There is a statistically significant impact of the website customization dimension on student satisfaction.

H.1.2: There is a statistical significant impact of the website interactivity dimension on student satisfaction.

H.1.3: There is a statically significant impact of the website care dimension on student satisfaction.

H.1.4: There is a statistically significant impact of the website cultivation dimension on student satisfaction.

H.1.5: There is a statically significant impact of the website convenience dimension on student satisfaction.

H.1.6: There is a statistical significant impact of the website multiple choices dimension on student satisfaction.

H.1.7: There is a statistically significant impact of the website characters dimension on its student satisfaction.

H.1.8: There is a statistically significant impact of the website social communication dimension on student satisfaction.

H.2: There is a statistically positive relationship between all dimensions of the website quality and student satisfaction at Al-Zaytoonah University.

8. Results Discussion

To examine the consistency of the questionnaire statements as a mean for data collection, Cronbach's alpha test was carried out. The results of this test are illustrated in table 2. These results clearly confirm that the linguistic formularization of the questionnaire statements is consistent, relevant and adequate to measure the variables of the study as all Cronbach's alpha values exceed the acceptable value level of 0.50.

Table 2: Cronbach's alpha Test

Variable	Cronbach's alpha Value
X1	0.772
X2	0.876
X3	0.861
X4	0.782
X5	0.867
X6	0.873
X7	0.809
X8	0.830
Y	0.706

Table 3: Factor analysis loading of questionnaire items

Items (Variable Measurement Statements)	Factor 1	Extraction	KMO
1. Customization (X1) Measurement Statements			
Useful information	0.859	0.738	
Attractive design	0.827	0.684	
Diversified contents	0.833	0.693	0.845
Type of services offered	0.517	0.267	
Updated information	0.842	0.708	
2. Interactivity (X2) Measurement Statements			
Easy access	0.773	0.598	
Defined services	0.795	0.634	
Extra outlets for service	0.838	0.703	0.867
Search means	0.836	0.669	
Good response	0.847	0.718	
3. Care (X3) Measurement Statements			
User friendly	0.814	0.662	
Responding to needs	0,673	0.452	
Preciseness	0,836	0,699	0.848
Quick implementation	0.856	0.773	
Problem solving	0,840	0.706	
4. Cultivation (X4) Measurement Statements			
Policy updating	0.720	0.519	
Programs information	0.707	0.500	
Suggestions & Alternatives	0/778	0.606	0.747
Educational guidance	0.716	0.512	
Policy updating	0.734	0,639	
5. Convenience (X5) Measurement Statements			
Ease and effectiveness	0.840	0.705	0.823
Response to requirements	0.830	0.689	

Items (Variable Measurement Statements)	Factor 1	Extraction	KMO
objective dealing	0.864	0.747	
Wanted information	0.725	0.526	
Extra Data	0.778	0.606	
6. Multiple options (X6) Measurement Statements			
services package	0.844	0.712	
Saving Efforts	0.783	0.613	
New Information	0.826	0.683	0.830
Necessary Advices	0.817	0.667	
Best Choice Determination	0.805	0.648	
7. Characteristics (X7) Measurement Statements			
Design beauty	0.743	0.553	
Browsing Enjoyment	0.721	0.520	
Easy Browsing	0.797	0.635	0.831
professional and objective design	0/783	0.613	
Design Uniqueness	0.723	0.522	
8. Social communication (X8) Measurement Statements			
Exchanging Information	0.784	0.615	
Society Information	0.820	0.672	
Higher Education Information	0.837	0.700	0.840
Opinion Exchanging	0.770	0.593	
Benchmarking information	0.661	0.437	

To ensure the questionnaire validity and reliability as a tool for collecting the required data and guarantee its relevance to be used for further statistical tests and examining the study hypotheses, factor loading and Pearson's correlation tests were conducted. The results of these tests are shown in tables (3, and 4) which are clearly indicated that the used mean of data collection is adequate, valid and reliable as the KMO values are exceed 0.70

The Pearson's correlation test results that presented in table 4 confirm the nonexistence of any unacceptable level of multicollinearity between the variables of the study that could negatively affected the validity of the Subsequent statistical test and results.

To determine the impacts of the university website quality dimensions on the university student's satisfaction and testing the study hypotheses, regression analysis was carried out.

Table 4: Pearson's correlation values

Variables	Cus. X1	Int. X2	Car. X3	Cul. X4	Con. X5	Opt. X6	Cha. X7	Soc. X8	Sat. Y
Cus. (X1)	1.000								
Int. (X2) Sig.	0.813 0.000	1.000							
Car. (X3) Sig.	0.758 0.000	0.813 0.000	1.000						
Cul. (X4) Sig.	0.570 0.000	0.758 0.000	0.813 0.000	1.000					
Con. (X5) Sig.	0.561 0.000	0.570 0.000	0.758 0.000	0.813 0.000	1.000				
Opt. (X6) Sig.	0.601 0.000	0.561 0.000	0.570 0.000	0.758 0.000	0.813 0.000	1.000			
Cha. (X7) Sig.	0.482 0.000	0.601 0.000	0.561 0.000	0.570 0.000	0.758 0.000	0.813 0.000	1.000		
Soc. (X8) Sig.	0.449 0.000	0.482 0.000	0.601 0.000	0.561 0.000	0.570 0.000	0.758 0.000	0.813 0.000	1.000	
Sat. (Y) Sig.	0.419 0.000	0.449 0.000	0.482 0.000	0.601 0.000	0.561 0.000	0.570 0.000	0.758 0.000	0.813 0.000	1.000

Cus.: Customization, Int.: Interactivity, Car.: Care, Cul.: Cultivation, Con.: Convenience, Cho.: multiple options, Cha.: Characteristics, Soc.: Social communication, Sat.: Customer satisfaction

This test results are shown in table (5) and they clearly confirm that there are positive significant impacts for each individual dimension of university website quality on the university students satisfaction as the ß values are ranging from ß= 0.300 to   ß= 0.623 with t values ranging from 7.075 to 14.090. These results also visibly approve the 8 sub-hypotheses of the study (H1.1 to H1.8). The collective impact of all university website quality dimensions on university students' satisfaction was also positive, significant and considerably good as ß= 0.585 with F value = 125.781, which plainly ratifies the first hypothesis (H.1). This result ensures that university website general quality and its offered services have a direct positive effect on the university student satisfaction.

The correlation coefficient of the relationship between the university website quality and its student satisfaction distinctly indicates that there is a positive, significant and strong relationship between these two variables as the value of R=0.590, F=125.781 at a significant level of 0.0000 which plainly confirms the second hypothesis (H2) which suggests that there is a positive , reasonably strong and significant relationship between the university website quality and the university students satisfaction .

Table 5:   Results of regression analysis

Independent variables: Website dimensions	Dependent variable Student satisfaction	R	R²	β	t	Sig
$H_{1.1}$: Customization (X1)		0.419	0.176	0.300	7.075	0.000
$H_{1.2}$: Interactivity (X2)		0.429	0.184	0.327	7.290	0.000
$H_{1.3}$: Care (X3)		0.438	0.188	0.349	7.469	0.000
$H_{1.4}$: Cultivation (X4)	Student satisfaction(Y)	0370	0.133	0.324	6.104	0.000
$H_{1.5}$: Convenience (X5)		0.505	0.256	0.402	8.981	0.000
$H_{1.6}$: Multiple options (X6)		0.520	0.271	0.408	9.344	0.000
$H_{1.7}$: Characteristics (X7)		0.593	0.349	0.585	11.294	0.000
$H_{1.8}$: Social communication(X8)		0.677	0.458	0.623	14.090	0.000
For all independent variables (all dimensions of website quality):						
R = 0.590 R^2 = 0.349 β = 0.585 F = 125.781 Sig = 0.000						

9. Conclusion
It has become very clear nowadays that the global network service and other diversified electronical facilities are considered as very effective means for successful competitive Campaigns. They are also an effective window for marketing, advertising and market share & sales expansion. This fact should encourage business organizations to pay extra attention for maintaining a sustainable improvement of their website and all types of their e-services to achieve a rational satisfaction of their customers. This is the main reason behind the continuous improvement of business organization website image and e-services.

In the case of educational and academic institutions the matter is totally different and critical due to the nature of the customers and the providing services. It might be true to say that the educational and academic institutions customers are knowledgeable customers. In addition to that the website services directly connected with the student (customer) academic practices, performance and academic programs transactions. This means that the university website is a formal, effective and very important mean of communication between the university systems and its students. Therefore a university website needs to be continually maintained, updated and improved to successfully meet the expectations of the university students.

Based on the above discussions Al-Zaytoonah University management is invited to pay extra attention to its website in term of enhancing the design of its image and improving the diversity of its

offered services to consolidate its competitive advantage and reputation and provide an reliable, adequate effective, efficient and fast formal mean of communication with its student locally and regionally.

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