Website Quality Factors from Jordanian Universities Students' Viewpoint

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ABSTRACT

This study aimed at identifying the quality factors perceived by Jordanian universities' students to be most important in relation to the use of websites. The questionnaire designed was based on the WEBQUAL instrument that identifies twelve quality dimensions (informational fit-to-task; interaction; trust; response time; design appeal; intuitiveness; visual appeal, innovativeness, flow-emotional appeal; integrated communication; business processes and viable substitute). Ten items that have been identified as the most important from Jordanian universities students' viewpoint in relation to the quality of websites: Fit-to-task, Interaction, Trust, Response Time, Intuitiveness, Visual Appeal, Innovativeness, Emotional Appeal, Integrated Communication and Business Processes. Based on the study findings, some recommendations were presented related to website quality factors, which may help Jordanian companies to develop their websites to satisfy customers' needs and wants.

KEYWORDS: Website Quality, WEBQUAL, Quality Factors, Internet.

I. INTRODUCTION

According to Forrester Research (2002), E-commerce (B2B and B2C) over the Internet is expected to grow from 2293.50 billion dollars in 2002 to 12837.30 billion dollars in 2006. By 2004, the total trade over the Internet is expected to grow to more than 6201.10 billion dollars the number of the Internet users is also increasing. By the end of 2001, a record of half billion people worldwide had Internet access from their homes. This number is expected to grow to almost one billion in 2005 (Hirsh, 2002).

At the end of 2002, there were 71,000 postpaid and prepaid Internet subscribers in Jordan, a very low Internet penetration of 1.33%, with only 15,000 added subscribers since last year, a growth of 27%. The Arab Advisors Group expects Internet subscribers to reach 186,000 by the end of 2006. By the end of 2001, there were 170,000 personal computers in the country, a penetration of 3.28%. However, with e-learning initiatives in progress, and also some ISPs (Internet Service Providers) subsidizing computers with Internet access, it is expected that the number of PCs in the country will increase, despite the relatively high cost of PCs (Arab Advisors Group, 2003).

These rapid developments require more actions to meet the growing numbers of the Internet users and to satisfy their needs and wants. To achieve this objective, the need to develop and improve the quality of services provided by the Internet becomes critical. The key to quality management is the measurement of quality enabling shortfalls to be identified and corrective action to be taken. A major difficulty for services is that they are intangible and so more difficult to measure than a tangible good. What is required is a means for measuring the quality of a service. In the web environment for general information seeking and business-to-consumer electronic commerce, users are consumers. Understanding consumers' expectations and how they feel

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about the websites they use has recently become more important. A company's or a website's continued success comes from two groups: new customers and repeat customers. Since it always costs more to attract new customers than to retain current customers, customer retention is more critical than customer attraction (Zhang and Dran, 2001).

I-I. Problem Statement

Web sites will become very important to companies, as more products and services will be bought over the Internet. Therefore, companies need to have web sites that live up to customers' expectations (Iwaarden et al., 2003). The increasing number of the Internet users in Jordan and the growing number of Jordanian companies that use the Internet to communicate with their customers impose on these companies to give this subject more interest and attention to best design their web sites to attract and achieve customers' satisfaction and then to maintain them forever. One of the most important methods to achieve these goals is introducing high quality web sites to satisfy customers' needs. Then the purpose of this study is to explore most important quality factors that the Jordanian universities' students rely on to evaluate web sites.

I-II. Study Objectives

- Investigating a list of factors that can be used as a checklist when creating or redesigning a Web site.
- Specifying the factors that determine the quality of website from the Jordanian universities students' viewpoint that they rely on when evaluating website quality, and what attracts them to revisit the website?

I-III. Study Importance

The importance of this study stems from the following reasons:

- The lack of field studies in Jordan that measure service quality in general and Web Sites quality in particular.
- The increasing number of the Internet users in Jordan.
- The increasing tendency by Jordanian companies toward using the Internet to conduct their transactions.
- The increasing contribution of the Internet as a new communication tool with customers.
- The importance of this study also stems from the expected findings that will aid marketers to best design their web site to create a competitive advantage.

II. THEORETICAL FRAMEWORK

II-I. Web Site Quality Importance

Why should a company provide high quality Web sites to its customers? Companies offer quality to satisfy their customers (Dale, 1999). Because a Web site is part of the connection between a company and its customers, it is evident that it should reflect the quality efforts that are in place throughout the company. There is also no human contact through Web sites. The interaction via the Internet between a company and a customer is always through technology. This means the "moment of truth" between a company and a customer is the Web site (Cox and Dale, 2002).

According to Ody (2000), the main reasons why customers go onto the Internet are to find information or buy a product or service with an emphasis on convenience and speed. Ziff and Davies (2000) points out that the concept of the Internet has raised customers' sensitivity to fast customer service. Any e-business that sticks to this basic principle when designing its Web site should be relatively successful.

The value of the Internet goes beyond adding another selling channel. Researchers report that the retention of customers online is easier than in traditional "bricks and mortar" companies where the online company spends three to five times less to retain them. Companies that retained customers exhibited traits of reliable basic operational execution. Their sites downloaded quickly; they responded to customer queries quickly; they delivered more than 95 percent of their orders on time and they made it easy for customers to return or exchange purchases (Agrawal et al., 2001).

The Internet can also play a pivotal role in enhancing

brand relationships and corporate reputations. The Web site must capture the attention of those people who know nothing or very little about the company, but are interested in its category. It must also build awareness of what the company does within the context of the industry in which it is competing (Chiagouris and Wansley, 2001).

II-II. Quality Factors Models

Factors associated with on line customer satisfaction can be identified from the preliminary research findings about online shoppers' behavior. Exploring the reasons behind peoples' decision to adopt online shopping can identify satisfaction factors. Numerous attributes that the researchers believe are related to online customer satisfaction are gathered from the past literature reviews.

SERVQUAL is a service-quality-measure model that was developed by Berry et al. (1985). The model identifies ten dimensions of service quality, and in 1990 the researchers further distilled the model into five service quality dimensions (Zeithaml et al., 1990): **Tangibles:** Equals the need for good site design, but does not acknowledge the importance of content in answering questions pre and post purchase, this is part of assurance. **Reliability:** Highlights the need for defined service quality levels for responding to e-mail and serving page impressions. **Responsiveness**: This is not only dependent on rapid delivery of web pages and the design of the site (i.e. large graphics and plug-ins are undesirable), but on providing employees with appropriate facilities to deliver good customer service via e-mail. **Assurance:** Indicates the need for security and privacy statements, and the need for relevant content to answer queries. **Empathy:** Achieved through non-automated, personal e-mail responses to customers, and to a lesser degree by automated personalization of web pages.

Zeithaml et al. (2002) developed the (e-SERVQUAL) measure of electronic service quality to study how customers judge e-service quality. This new model was drawn up through a three-stage process involving exploratory focus groups and two phases of empirical data collection and analysis. It contains seven dimensions: **Efficiency:** refers to the ability of the customers to get to the Web site, search for information and log out with minimal effort. **Fulfillment:** involves the accuracy of service promises, having products in stock and delivering the products in the promised time. **Reliability:** is associated with the technical functioning of the site, particularly the extent to which it is available and functions properly. **Privacy:** is related to assurance that shopping behavior data are not shared and that credit card information is secure. **Responsiveness:** refers to the ability of e-tailors to provide appropriate information to customers when needed. **Compensation:** involves receiving money back and returning shipping and handling costs. **Contact:** is associated with the ability of customers to talk to a live service agent online.

Based on the concepts from both the service quality and retailing literature, Wolfinbarger and Gilly (2002) developed a scale named (comQ) with four factors: Web site design, Reliability, Privacy/security and Customer service. They state that the different dimensions of their measure of e-SQ have different effects, and hence different results. Reliability has been found to be the most significant predictor of customer satisfaction.

Yang et al. (2001) measured consumer perceptions of service quality using six dimensions: ease of use, content displayed on the Web site, accuracy of content, timeliness of response, aesthetics and privacy.

Zhang and Dran (2001) are looking for the more emotional and motivational aspects behind the concrete web quality factors. They define only three factors: the basic factor, the performance factor and the exciting factor. These factors represent the customers' emotions when using web sites. The basic factor consists of aspects that customers will not notice unless they are missing, the performance factor consists of aspects that customers will explicitly look for and they will always be noticed (whether they are missing or not), the exciting factor consists of aspects that will excite the customer when they are available, but their absence will not be noticed by customers. This is quite a different approach to the problem of web site quality than the other approaches.

Loiacono et al. (2000) went a step further and

developed an instrument (WEBQUAL) that measures satisfaction with website quality. Their study identified dimensions of quality of a website and also provided empirical evidence of validity (convergent and discriminate) and reliability, which confirm the construct validity of the WEBQUAL instrument. The dimensions that WEBQUAL provides are very appropriate in categorizing the different types of quality factors related to a website. According to Barnes and Vidgen (2001), the WEBQUAL instrument is used nowadays to assess the web-site quality from the perspective of the "voice of the customer". Loiacono et al. (2000) categorized quality factors into twelve dimensions of WEBQUAL: Informational Fit-to-task, Interactivity, Trust, Responsiveness, Design, Intuitiveness, Visual Appeal, Innovativeness, Flow Emotional Appeal, Integrated Communications, Business Processes and Viable Substitute. The last three WEBQUAL dimensions (integrated communication, business processes and viable substitute) are not "stand alone" characteristics of website quality. Instead, they address whether the website complements other delivery channels.

Cox and Dale (2002) developed a model called Key Quality Factors (KQFs) as a checklist when creating a Web site, or redesigning a new one, to assess how a Web site can deliver what its users expect. The model is based on: Ease of use, Customer confidence, On-line resources and Relationship services.

II-III. Current Study Model

Most of the previous models are fundamental, based on SERVQUAL as a starting point to measure website quality factors. SERVQUAL has been subject to certain criticisms, including ambiguity in the definition of expectations, its doubtful applicability in some industries (Teas, 1993), the need for expectation measurement (Cronin and Taylor, 1992), and SERVQUAL's dimensionality (Carman, 1990).

Teas (1993) observed that the Perception-Expectation Model SERVQUAL is problematic in certain circumstances. The three weak points which Teas (1993) sees as basic and which permit us to question the validity of the SERVQUAL model are; the conceptual problems, and those of definition related to expectations, its theoretical justification as a framework of expected perceptions and the validity of the measurements of these points

A comparison of WEBQUAL (Loiacono et al., 2000) to SERVQUAL (Parasuraman et al., 1988), based on the insights provided by Voss (2000), leads to the following observations: First, reliability, (which, according to Voss, includes the ability to connect to the web, downtime, systems not crashing and order fulfillment), is not addressed by WEBQUAL. One could actually say that WEBQUAL considers reliability to be a given, or in other words, a precondition for a good website. Second, responsiveness is addressed by both SERVQUAL and WEBQUAL. Third, what is defined as assurance by SERVQUAL is captured by the notion of trust by WEBQUAL? Fourth, empathy translates into flow-emotional appeal in WEBQUAL. Finally, tangibles are captured by design appeal and visual appeal in WEBQUAL.

Based on this comparison, the present study adapted WEBQUAL dimensions to measuring customers' perceptions of website quality for the following reasons:

1. WEBQUAL is a more comprehensive model than the other models and reflects all website quality dimensions obviously.
2. Other models designed to measure service quality provided by website rather than the quality of the website itself.
3. WEBQUAL seems more pertinent to interface design than to service quality measurement (Zeithaml et al., 2002).
4. According to Barnes and Vidgen (2000), the WEBQUAL instrument is used nowadays to assess the web-site quality from the perspective of the "voice of the customer."
5. WEBQUAL is a refined version of SERVQUAL and was used in the context of electronic commerce websites (Barnes and Vidgen, 2000).
6. WEBQUAL is the only psychometrically sound instrument that is currently available for assessing website quality (Tsikriktsis, 2002).

II-IV. WEBQUAL Dimensions

In this section, the researcher relies on the theoretical framework developed by Loiacono et al. (2000) in their study entitled "WebQual™: A Web Site Quality Instrument" to measure the website quality:

1. **Informational Fit-to-Task:** The Web site must assist a customer in completing a task. Customers evaluate a Web site based on how well the Web site assists them in completing a task. The more useful a Web site is to a customer, the more it will be accepted and used by that customer.
2. **Interaction:** Interactivity is any facility by which individuals and companies communicate directly with each other without concern for distance or time. Incorporating a function that allows customers to communicate with fellow stakeholders within a site (e-mail feedback, questionnaires, user groups, software downloads…etc) fosters involvement and may result in return visits.
3. **Trust:** Customers require that the Web site and the information it contains be trustworthy and secure. Companies that violate their customers' trust may suffer a serious loss of customer support.
4. **Response Time:** The time it takes a customer to download a Web page and subsequently to interact with it has an affect on a customer's perception of the site's quality. In many cases slow, loading Web sites will not be revisited.
5. **Design Appeal:** Design appeal refers to the graphical and textual stimuli, which impact the customer's sense of ease or comfort with the Web site. Hard to read text and confusing or garish graphics are likely to lower a site's attraction to visitors.
6. **Intuitiveness:** How easy it is to learn and become skillful at using the Web site. Navigating through it must also feel natural and be easy to learn. Consistency helps consumers learn and remember the site's structure.
7. **Visual Appeal:** Visual appeal affects how the customer "views" the site. Two components affect the aesthetics of a Web site: atmospherics and complexity. Atmospherics is an effort to design buying environments to produce specific emotional effects in the buyer that enhance his purchase probability. Web pages of moderate complexity are more effective in maintaining user attention and satisfaction.
8. **Innovativeness:** The uniqueness and creativity possessed by the Web site constitutes innovativeness. Just as entertaining or humorous advertisements are more likeable, it appears that the same applies to innovative Web site.
9. **Flow-Emotional Appeal:** In Internet usage, flow is described as "the state occurring during network navigation which is: characterized by a seamless sequence of responses facilitated by machine interactivity, intrinsically enjoyable, accompanied by a loss of self-consciousness, and self-reinforcing. In order to achieve flow, consumers must perceive a balance between their skills and the challenges of an activity.
10. **Integrated Communication:** Web must fit with and be incorporated into an organization's larger strategy that uses multiple means of communicating with customers. Print and television advertising, mail campaigns and other marketing techniques help drive shoppers to a site.
11. **Business Processes:** Before deciding to incorporate the Web into its media portfolio, a company must first consider how the Web site will support its business functions. At least some of a company's key business processes that touch a customer need are integrated into the Web site.
12. **Viable Substitute:** The Web site should be a viable substitute for customers to interact with the business for at least some purposes, it must allow them to do what they want to do in a more effective and efficient manner than if they were to do it through "traditional" means.

III. LITERATURE REVIEW

Several years ago, there were a number of studies which addressed different aspects of website purposes and usage and they made important contributions to a growing body of knowledge. In this section, the

researcher summarized some of the recent studies related to website quality factors:

Barnes and Vidgen (2003) examine the results of a quality survey of a Web site provided by the Organization for Economic Co-operation and Development (OECD). The site is examined before and after a major redesign process. The instrument, WebQual, draws on previous work in Web site usability information quality, and service interaction quality to provide a rounded framework for assessing e-commerce and e-government offerings. The metrics and findings demonstrate not only the strengths and weaknesses of the sites, but also the different impressions of users in member countries. These findings have implications for e-government Web site offerings.

Gounaris and Dimitriadis (2003) explore the quality dimensions that the visitors of national and foreign business-to-consumer portals use to assess the performance of their service offering. Based on the SERVQUAL model and previous research on Web site evaluation and quality, the study identified three quality dimensions that proved to be stable across sites' nationality and user profiles (customer care and risk reduction benefit, information benefit and interaction facilitation benefit). Several implications are drawn from these results for both Web site marketers and future academic research.

Tsikriktsis (2002) investigates the link between culture and website quality expectations. Website quality is measured through a recently developed instrument (WEBQUAL), while culture is measured through Hofstede's cultural dimensions. The analysis reveals that two cultural dimensions (masculinity and long-term orientation) are associated with higher website quality expectations. The findings have important managerial implications for globalization of e-services.

Cox and Dale (2002) focus on identifying the key quality factors in Web site design and use. From the factors identified, a conceptual model has been developed to assess how a Web site can deliver what its users expect. The model is based on: ease of use, customer confidence, on line resources and relationship services. These facts have been validated in an assessment of a range of Web sites. The model comprises a useful measurement tool, which designers can use to suffice the quality of their Web sites.

Iwaarden et al. (2003) focus their efforts on identifying the quality factors perceived to be the most important in relation to the use of Web sites. The questionnaire used was based on the SERVQUAL instrument that identifies five quality dimensions in service environments. The results indicate that the quality dimensions found applicable in the service sector are also applicable to Web sites. The items that have been identified as the most important in relation to the quality of Web sites are tangibles (the appearance of the Web site, navigation, search options, and structure), reliability (the ability to judge the trustworthiness of the offered service and the organization performing the service), responsiveness (the willingness to help customers and provide prompt service), assurance (the ability of the Web site to convey trust and confidence in the organization behind it with respect to security and privacy),and empathy (the provision of caring, individualized attention to customers, including user recognition and customization).

Iwaarden et al. (2002) conducted a survey among students of two universities (Erasmus University Rotterdam, The Netherlands, and Northeastern University Boston, USA) to study what quality factors are perceived as important in relation to their use of web sites. The results of the questionnaire survey were analyzed in relation to the five service quality (SERVQUAL) dimensions (tangibles; reliability; responsiveness; assurance; empathy) as developed by Zeithaml et al.(2000). There is evidence that the same dimensions are applicable to E-Business, although the underlying aspects have to be specified within the E-Business context.

Barnes and Vidgen (2002) report on the application of a new version of WebQual to Internet bookstores: Amazon, BOL, and the Internet Bookshop. WebQual draws on previous work in three areas: Web site usability, information quality and service interaction quality to provide a rounded framework for assessing e-commerce

offerings. Although WebQual is grounded in the subjective impressions of Web site users, the data collected lends itself to quantitative analysis and the production of e-commerce metrics such as the WebQual Index. The reliability of the instrument is examined and core constructs of Web site quality identified using factor analysis. The role of WebQual in assessing an organization's e- commerce capability is discussed.

IV. RESEARCH METHODOLOGY

The research design consists of a WEBQUAL survey questionnaire, which was distributed to a convenience sample of universities' students in Jordan.

IV-I. Study Instrument

The measurement instrument designed was based on the WEBQUAL instrument developed by Loiacono et al. (2000). The questionnaire is a concise multiple item scale that contains 36 5-point Likert-type items presented in response format with anchors 'strongly agree' and 'strongly disagree'. The questionnaire was translated to Arabic and pre-tested, prior to posting it, in order to assess the ability of the respondents to understand and answer the items. The questionnaire consisted of the following parts: The first part consisted of the 36 aspects of web quality. The second part consisted of the personal information (gender, age, university, academic discipline).

IV-II. Sampling and Data Collection Procedures

The survey is undertaken under the student population of the Jordanian Universities because the students are expected to be familiar with websites and the Internet. Because of time and cost constraints, a convenience sample of students was selected from four Jordanian universities: two governmental universities (Mutah University and University of Jordan), and two private universities (Alzaytoonah University and Al-Isra Private University). Then 400 questionnaires were distributed. The returned questionnaires were carefully examined for completeness. The total number of usable responses resulting from this process was 336 (response rate was 84%).

IV-III. The Variables Operational Definitions and Measurement

To measure the relative importance of the different dimensions of Website Quality dimensions, we asked the respondents to evaluate, on a 5-point scale, the importance of the items of WEBQUAL (Table 1):

Table (1)
WebQual Dimensions

Dimension	Description of Concept	Questions
Fit-to-task	The extent to which users believe that the Web site meets their needs.	(q1–q3)
Interaction	The ability of consumers to interact with the Web site to receive tailored/personalized information or service.	(q4–q6)
Trust	The concern for security and information privacy.	(q7–q9)
Response Time	The time that it takes a consumer to download and interact with Web site.	(q10–q12)
Design	The aesthetics of a Web site as well as the navigational system.	(q13–q15)
Intuitiveness	The ease of using/interacting with the Web site.	(q16–q18)
Visual Appeal	The Web site's visual appeal.	(q19–q21)
Innovativeness	The Web site's uniqueness and creative feel.	(q22–q24)
Emotional Appeal	The emotional effect the Web site has on consumers.	(q25–q27)
Integrated Communication	The relationship the Web site has with respect to other forms of media (radio, television, etc).	(q28–q30)
Business Processes	The relationship the Web site has with respect to the company's business processes.	(q31–q33)
Viable Substitute	The viability of the Web site as an alternative means of interacting with the company.	(q34–q36)

V. DATA ANALYSIS

Descriptive analysis was used to present a profile of the respondents. Factor analysis was used to reduce insignificant variables.

Table (2)

Profile of Respondents.

		Frequency	Percent
SEX	Male	193	57.4
	Female	143	42.6
AGE	Less than 20	65	19.3
	21-25	233	69.4
	More than 25	38	11.3
UNIVER	Governmental	171	50.9
	Private	165	49.1
FACULTY	Human studies	213	63.4
	Scientific studies	123	36.6
EDLEVEL	First	63	18.8
	Second	56	16.7
	Third	87	25.9
	Fourth	98	29.2
	Fifth	32	9.5

V-I. Profile of Respondents

A result in Table (2) indicates that more than half of the respondents were males. The majority of respondents (69.4) were between (21-25) age group. The education level of the majority of respondents was at third and fourth year. The respondents were distributed equally between private and governmental universities. About two-third of the respondents were enrolled in Human studies.

V-II. Factor Analysis

A principal component factor analysis with varimax rotation was used on the 36 items that assessed perceived website quality. The Bartlett test of sphericity was significant (Bartlett's Test of Sphericity = 4686.430, Significance = .000) and the Kaiser-Meyer-Olkin measure of sampling adequacy was larger than 0.6 (KMO = 0.883), which showed that the use of factor analysis was appropriate. 30 of the 36 items in the questionnaires were reduced to ten factors with factor loadings greater than 0.5 and an eigenvalue greater than 1.0. The resultant factor structure explained 63.843 % of the variance. The ten factor loadings of each item are listed in Table (3).

V-III. Findings and Discussion

The findings indicated that the original WebQual dimensions did not factor out. Some similarities and differences were found between the present constructs and the original dimensions. The overall reliability of the scale was satisfactory, since the Cronbach's alpha coefficient was equal to 0.9205. In addition, all dimensions rendered standard coefficients larger than 0.5, and the reliability coefficient of each factor ranged from 0.501 to 0.805. This showed good internal consistency, and deviations could therefore be sought in the factorization.

Ten factors were generated from the factor analysis: Fit-to-task, Interaction, Trust, Response Time, Intuitiveness, Visual Appeal, Innovativeness, Emotional Appeal, Integrated Communication and Business Processes.

Factor one was Response Time, which explained 26.884 % of the variance. All of the items (Q11, Q10, Q12) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the ability of the Website to provide little waiting time between actions and the Website's response, loading quickly and should not take long to load.

Factor two was Intuitiveness, which explained 6.212 % of the variance. All of the items (Q16, Q17, Q18, Q15) in this factor were similar to the original dimensions of the WEBQUAL scale except for one new item (Q15) which was added to the dimension. All the items in this dimension were related to the ability of the Website to be easy to use.

Factor three was Integrated Communication, which explained 5.155 % of the variance. All of the items (Q30, Q28, Q29) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the ability of the Website to reflect the image of the company.

Table (3)
Rotated Component Matrix.

Variables	Component									
	1	2	3	4	5	6	7	8	9	10
Q11	.777									
Q10	.701									
Q12	.662									
Q13										
Q14										
Q16		.744								
Q17		.722								
Q18		.665								
Q15		.505								
Q30			.776							
Q28			.752							
Q29			.716							
Q26				.821						
Q25				.792						
Q27				.695						
Q33					.728					
Q32					.649					
Q36					.501					
Q34										
Q35										
Q31										
Q5						.742				
Q4						.655				
Q6										
Q20							.747			
Q19							.730			
Q21							.713			
Q23								.779		
Q24								.746		
Q22								.721		
Q8									.805	
Q9									.744	
Q7									.642	
Q1										.790
Q2										.726
Q3										.535
Explained variance%	**26.884**	**6.212**	**5.155**	**4.423**	**4.168**	**3.887**	**3.584**	**3.374**	**3.214**	**2.942**

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 14 iterations.

Factor four was Emotional Appeal, which explained 4.423 % of the variance. All of the items (Q26, Q25, Q27) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the emotional effect the Web site has on consumers (happiness, sociability, cheerfulness).

Factor five was Business Processes, which explained 4.168 % of the variance. All of the items (Q33, Q32, Q36) in this factor were similar to the original dimensions of the WEBQUAL scale, except one item (Q31) which was deleted, and one new item (Q36) which was added. All the items in this dimension were related to the ability of the Website to provide customers with means to complete their transactions via the website.

Factor six was Interaction, which explained 3.887% of the variance. All of the items (Q5, Q4) in this factor were similar to the original dimensions of the WEBQUAL scale, except one item (Q6) was deleted. All of the items in this factor were related to the ability of the Website to provide customers with interactive features, which help them to get information tailored to their specific needs.

Factor seven was Visual Appeal, which explained 3.584 % of the variance. All of the items (Q20, Q19, Q21) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the ability of the Website to display visually pleasing design.

Factor eight was Innovativeness, which explained 3.374 % of the variance. All of the items (Q23, Q24, Q22) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the ability of the Website to show creativity and innovativeness design and content.

Factor nine was Trust, which explained 3.214 % of the variance. All of the items (Q8, Q9, Q7) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the security and safety issues of the Website.

Factor ten was Informational fit-to-task, which explained 2.942 % of the variance. All of the items (Q1, Q2, Q3) in this factor were similar to the original dimensions of the WEBQUAL scale and related to the ability of the Website to provide customers with pretty, adequately and effective information to meet their needs and wants.

VI. RECOMMENDATIONS

According to the study results, there are some recommendations related to the most important quality factors which may help companies to develop their web sites on the Internet to satisfy customers' needs:

1. Companies should avoid long download times. If your images take too long to download, surfers will get bored and click right on past your Web site. Use small clusters of graphics, as opposed to one large sheet of color and form. Keep graphics on your home page interesting, but get rid of complex, overdone graphics that take forever to download.
2. Companies should develop an intuitive navigation system that is easy to learn and master. Test the website using the different types of systems and browsers that customers might use. Companies should also pay extra attention to designing the pages in such a way that they are easy to read and understand.
3. Companies should develop company image across media. Make sure that there is consistency in the message communicated by the site and other media. Incorporate that image into the Web site. Your design and content should be suitable for the people you want to reach, just as you would do with any piece of advertising you produce. Remember, your Web site is a form of advertising and it is a projection of your company image.
4. Companies should create an emotional interaction and make sure that the customer has a positive experience. People like to attach a face to your business and feel personally connected, so you might even want to include a picture of yourself and those of other key staff members. Companies should make it easy for the customer to interact with the website and receive personalized information or service.
5. Companies should allow customers to conduct business functions over the Web site. Make it easy for your customer to place an order. Allow shoppers to order directly from your Web site, but also offer alternatives like phone or fax for people who don't trust online transaction.

6. Companies should support consumer interaction via the Web site and the capability to receive tailored information. Your Web site should have many, listings of your email address, phone number, address, and instructions for ordering products or services.
7. Companies should avoid cluttered pages and ensure that colors, graphics and text are visually appealing. Product pictures and prices should be clearly displayed, along with available options.
8. Companies should also try to make the website unique, creative and entertaining. This may be done through Eliminating unnecessary words, using the active voice over passive voice, using short, simple sentence structure, using each paragraph to relay only one idea, using bulleted lists, limiting scrolling/insert jump links, highlighting important, informative words.
9. It's important for consumers to know that there are laws that protect them when they shop with charge and credit cards in cyberspace. If you take extra steps to ensure buyer information is protected, let visitors know and promote them so that customers feel secure in dealing with the company.
10. Companies should specify what information customers needed and used. Ensure that information on the Web site is what consumers want and need. A web page should provide its most important information at the beginning of the content to increase the likelihood that the visitor will be exposed to it.

Future Research

There are several issues which may need a further research in the future. Researchers should answer such questions as the relationship between demographic characteristics and WEBQUAL dimensions; and to find out the relationship between WEBQUAL dimensions and customer satisfaction? Examine how WEBQUAL dimensions and satisfaction contribute to loyalty? Are there any differences between respondents in relating to WEBQUAL factors, based on their profiles (age, gender… etc)? Determine the most important WEBQUAL factors from the viewpoint of other groups not only students? Examine whether these dimensions vary across portal users to become a useful segmentation instrument.

VII. WEBQUAL QUESTIONNAIRE

Part one

This survey deals with your opinion of the Websites Quality Factors. Based on your experiences as a user of Internet and websites, please show the extent to which you think such websites should possess the feature described by each statement. If you strongly agree that these websites should possess a feature, circle 5. If you strongly disagree that these units should possess a feature, circle 1. If your feeling is less strong, circle one of the numbers in the middle. There are no right or wrong answers—all we are interested in is a number that truly reflects your perceptions about websites quality factors.

No.	Informational Fit-to-Task	Strongly agree				Strongly disagree
1	The information on the Website should be pretty much what I need to carry out my tasks.	5	4	3	2	1
2	The Website should adequately meet my information needs	5	4	3	2	1
3	The information on the Website should be effective.	5	4	3	2	1
	Interactivity					
4	The Website should allow me to interact with it to receive tailored information.	5	4	3	2	1
5	The Website should have interactive features, which help me accomplish my task.	5	4	3	2	1

6	I should be able to interact with the Website in order to get information tailored to my specific needs.	5	4	3	2	1
	Trust					
7	I should feel safe in my transactions with the Website.	5	4	3	2	1
8	I should trust the Website to keep my personal information safe.	5	4	3	2	1
9	I should trust the Website administrators would not misuse my personal information.	5	4	3	2	1
	Responsiveness					
10	When I use the Website there should be little waiting time between my actions and the Website's response.	5	4	3	2	1
11	The Website should load quickly.	5	4	3	2	1
12	The Website should not take long to load.	5	4	3	2	1
	Design Appeal					
13	The display pages within the Website should be easy to read.	5	4	3	2	1
14	The text on the Website should be easy to read.	5	4	3	2	1
15	The Website labels should be easy to understand.	5	4	3	2	1
	Intuitiveness	Strongly agree				Strongly disagree
16	Learning to operate the Web site should be easy for me.	5	4	3	2	1
17	It should be easy for me to become skilful at using the Website.	5	4	3	2	1
18	I should find the Website easy to use.	5	4	3	2	1
	Visual Appeal					
19	The Website should be visually pleasing.	5	4	3	2	1
20	The Website should display visually pleasing design,	5	4	3	2	1
21	The Website should be visually appealing.	5	4	3	2	1
	Innovativeness					
22	The Website should be innovative.	5	4	3	2	1
23	The Website design should be innovative.	5	4	3	2	1
24	The Website should be creative.	5	4	3	2	1
	Flow - Emotional Appeal					
25	I should feel happy when I use the Website.	5	4	3	2	1
26	I should feel cheerful when I use the Website.	5	4	3	2	1
27	I should feel sociable when I use the Website.	5	4	3	2	1
	Integrated Communications					
28	The Website should project an image consistent with the company's image.	5	4	3	2	1
29	The Website should fit with my image of the company.	5	4	3	2	1
30	The Website's image should match that of the company.	5	4	3	2	1
	Business Process					
31	The Website should allow transactions on-line.	5	4	3	2	1
32	All my business with the company should be completed via the website.	5	4	3	2	1

33	Most all business processes should be completed via the Website.	5	4	3	2	1
	Viable Substitute					
34	It should be easier to use Website to complete my business with company than telephone, fax, or mail.	5	4	3	2	1
35	The Website should be easier to use than calling an organizational representative agent on the phone.	5	4	3	2	1
36	The Website should be an alternative to calling customer service or sales.	5	4	3	2	1

Part two

Demographic Variables:

Q1: Gender:		✓		**Q4: University:**		✓
1	Male		1	Governmental		
2	Female		2	Private		
Q2: Age:		✓	University name			
1	Less than 20		**Q5: Education Level:**			✓
2	21-25		1	First		
3	More than 25		2	Second		
Q3: Academic Discipline:		✓	3	Third		
1	Human Studies Faculty		4	Fourth		
2	Scientific Faculty		5	Fifth		

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عوامل جودة الموقع على شبكة الإنترنت من وجهة نظر طلبة الجامعات الأردنية

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ملخص

هدفت هذه الدراسة إلى تحديد أهم عوامل الجودة المدركة للمواقع على شبكة الإنترنت من وجهة نظر طلبة الجامعات الأردنية. وقد تم تطوير أداة البحث (الاستبانة) اعتمادا على المقياس المعروف (WEBQUAL) الذي يحدد اثني عشر بعدا (ملاءمة المعلومات للمهمة، التفاعلية، الثقة، الاستجابة، التصميم المادي الجذاب، الإدراك الحسي، المظهر المرئي، الإبداع، المحتوى العاطفي، الاتصالات المتكاملة، معالجة الصفقات، البديل للتطبيق). وقد أظهرت نتائج التحليل العاملي عشرة أبعاد تعتبر الأكثر أهمية من وجهة نظر المستخدم الأردني وتتعلق بجودة الموقع على شبكة الإنترنت وهي: ملاءمة المعلومات للمهمة، التفاعلية، الثقة، الاستجابة، الإدراك الحسي، المظهر المرئي، الإبداع، المحتوى العاطفي، الاتصالات المتكاملة، معالجة الصفقات. واعتمادا على النتائج التي توصلت إليها الدراسة، تم عرض بعض التوصيات المتعلقة بأبعاد جودة الموقع على شبكة الإنترنت التي يمكن أن تساعد الشركات في تطوير مواقعها بالشكل الذي يشبع حاجات العملاء ورغباتهم.

الكلمات الدالة: جودة موقع الإنترنت، عوامل الجودة، الإنترنت.

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