

Designing and Marketing Features of International Airlines Websites: A Comparative Study

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Abstract

This article is an attempt to analyze the websites of a number of international airlines by adopting the functionalism approach. For this, designing and marketing features of these websites are compared. According to the functionalist approach, every website should have at least one specific function. This analysis is conducted by employing 12-factor website analysis criteria put forward by Bowman, Johnson, and Hodges (2001). The findings suggest that the success of each website is considerably translated into the success of the respective airline and vice versa. This is because the number of visitors of the website is positively correlated to the rate of customers of the airline.

Keywords: Airline Website, Marketing Features, Functionalism Approach, Interaction, Navigation, Performance, Marketing

1. Introduction

When emerged, the internet had limited users and unknown potential. However, it has developed into a pivotal component of modern life with the passage of time and science advances thanks to its versatility and massive potentials, a fact that is more visible in developed countries. E-marketing is one of the most important and effective applications of this phenomenon. E-marketing is usually defined as online transactions, sales, purchasing and auctions via the internet. E-commerce is also interpreted as the dissemination of information, marketing, promotional efforts, establishing and maintaining commercial ties, buying and selling of goods and services or transmission of funds or data over telecommunication networks and data processing tools, primarily the Internet (Chaffey, Ellis-Chadwick, Mayer, & Johnston, 2009).

The main advantage all these activities have in common is facilitating commercial affairs and saving administrative costs and time. The primary benefit of E-commerce lies in establishing direct contact with an individual or the whole audience. This in turn results in a stern competition between stakeholders who vie for dominance in the market, the emergence of a variety of suppliers, products and services which will lead to reduced costs and higher satisfaction of customers.

E-market refers to an economic phenomenon in which commodities, purchasers and sellers are in the same loop and are clearly related to each other via electronic and virtual means Valente, Feijó, Silva, & Clua (2016). Public relations of an e-commerce, which is based on a digital insight, act in anticipation of customers' demands and satisfy their every single need in advance, while considering age, gender and even individual needs of the target population. It prepares both soft, animated, application-based and hard, printable catalogue of its products and services to suit a variety of customers. This removes time and space constraints and makes online availability of information a necessity. The relations are mutual, the audience not seen as a whole, but are individual-based and the customer-first policies come to the fore.

Considering the following significant factors, this study is worth to be conducted:

- Increasing the numbers of internet users around the world
- Increasing the income of the airlines via online ticket reservation
- Creating web sites is considered as the single channel of communication with customers for online marketing
- Being the first study of its kind in Iran
- Examining the effects of this phenomenon on the service sector
- Obtaining information on the principles of designing websites

The main objective of this study is comparison of designing and examining online marketing features of websites of international Asian and European airlines and selected American,

Australian and African airlines. The minor objectives are:

- Examining the designing features of the websites of international airlines
- Investigating the marketing efforts of these websites
- Ranking the websites of international websites based on their designing features and online marketing efforts
- Offering solutions to improve the designing of the websites and online marketing efforts.

To achieve the above-mentioned research objectives, the following hypotheses were constructed:

Major hypothesis 1: There is a significant difference between designing features of the websites of international Asian and European airlines and other airlines (selected American, Australian and African airlines)

Minor hypothesis 1: There is a significant difference between interactive features of the websites of international Asian and European airlines and other airlines (selected American, Australian and African airlines)

Minor hypothesis 2: There is a significant difference between navigational features of the websites of international Asian and European airlines and other airlines (selected American, Australian and African airlines)

Minor hypothesis 3: There is a significant difference between performance features of the websites of international Asian and European airlines and other airlines (selected American, Australian and African airlines)

Major hypothesis 2: There is a significant difference between online marketing features of the websites of international Asian and European airlines and other airlines (selected American, Australian and African airlines)

2. Conceptual Framework

Structural functionalism is a major theory following the emergence of sociology. This theory attempts to explain social events and institutionalized activities based on the needs of the society. Structural functionalism theory sees society as comprising various interrelated constituents which shape different structures and each has a specific function in the whole system. It has roots in Comte, Spencer and Durkheim's works and their devotion to organism, social needs, structures and functions. This theory doesn't suggest that the media are under pressure of the dominant ideology and therefore is not an analytical theory. Thus, we could look at the society through the lenses of this theory as the organs of a living organism, each with a different function.

Structural functionalism presumes social system as a whole which incorporates interrelated constituent elements such as organizations and social institutions. This presumption could be

borrowed to see websites as parts of an organization which attempt to contribute to the survival and success of that organization and at the same time establish connections between internal and external parts of the respective entity. Moreover, organizations could address at least part of their needs and demands via virtual means, i.e. through websites which will boost their chances of success (Alford & Page, 2015).

According to the functionalism theory, every website should have at least one specific function. In this approach, every group or entity takes on a specific function which will contribute to the continuation of the system. This theory intends to trace the formation of behavioral patterns because it believes that behavioral patterns are formed when they are functionally useful.

Introduction of technology and penetration of computers in every corner of the modern age has significantly influenced the way individuals obtain news and information. People would refer to newspapers and TVs in the past in search of the latest news and information, but much has changed and today they have given way to the internet. New patterns emerge in response to new needs and disappear with changes in the respective needs. This analysis will be conducted as well to find out the function of a website for the organization and other websites.

2.1 Online Marketing

There is no consensus about the definition of online marketing. Online marketing is initiation and maintenance of relations with customers through timely activities in order to facilitate exchange of views, goods and services which meet the objectives of both parties (seller and purchaser) (Wilson, 1995).

For Rönkkö (2014), internet marketing is defined as fulfilling marketing objectives through electronic communication technologies. Following a comparison of traditional and technology-based marketing techniques, Chen (2006) suggests that virtuality of the latter is what separates these two. Internet marketing is immediate, i.e. all parts happen around the same time whereas traditional marketing follows a linear format, i.e. it is stage-based (each stage at a time). For example, first marketing research, then product development and product offer in the final stage.

Segmentation in traditional marketing is typically based on demographic characteristics (age, gender and income), whereas in technology-base marketing, behavior characteristics such as situations, rate of use and positions of the consumers define the segmentation. In traditional marketing, companies attempt to sell their products through advertisements. In contrast, companies which follow in technology-based marketing motivate the customers and the roles are reversed, i.e. customers go after companies to buy their products and services. Moreover, in traditional marketing, companies employ universal advertisement and promotional tools on a mass scale while in technology-based marketing these tools are personalized and may vary for each customer. Pricing is another issue that further sets traditional marketing from technology-based version apart; while in the former companies set the price in the latter it is

the customer who plays the primary role. While In traditional marketing there are a variety of mediators, technology-based marketing promotes immediacy. Finally, while traditional marketing usually lack variety of products, in technology-based marketing the products are typically personalized, made-to -order and thus offer much more variety to the potential suitors.

2.2 Internet and Marketing Mix

Traditional marketing concepts have taken a new turn following the introduction of internet in marketing and emergence of internet marketing. Marketing mix is one of the issues in electronic marketing that has attracted extensive attention among others. Internet marketing has not only revolutionized traditional marketing mix (products, price, distribution, place and promotion), but also has introduced new elements to this mix. The significance of marketing mix lies in the fact that these elements could be manipulated to produce the desired effect on customers and market.

The new components in the electronic marketing mix are defined here:

Personalization: It is the first elements of internet marketing mix and is defines as customizing goods and services for unique identity of a customer. Personalization is a means of meeting the customer's needs more effectively and efficiently, making interactions faster and easier and, consequently, increasing customer satisfaction and the likelihood of repeat visits. Technological advances have enabled internet marketing to customize goods and services so that all needs and demands of every customer are met.

Website: It is an electronic marketing tool which gives users access to the company at any time and in every place.

Privacy Confidentiality: It refers to an individual's ability to protect their information from others. To put it more accurately, it means how, when, where and what information about the rights of individuals and organizations are transferred to third parties.

Security: Trusting e-commerce and prevention of others from access to financial information of customers are critical to e-marketing. It is important to differentiate between privacy confidentiality and security; there are two parties to privacy confidentiality (the company and the customer). Any revelation of the customer's information is interpreted as a deliberate act of the company. However, there is a third party in security element who wishes to steal the information of both the customer and the company. To put it simply, companies may reveal personal information of the customer for a specific purpose according to personal confidentiality element but in security element the company doesn't wish to publish the customer's information and it is the third party or the hacker who intends to steal them.

Promotion: The efforts intended to share information about the products of a company with one or more group of customers to influence their decisions. Universal advertisements are one of the promotion tools of internet marketing. This element is primary in the mix due to its massive importance in internet marketing and the highest rate of influence from the internet.

2.3 The Method of Web Site Evaluation

Bowman, Johnson, & Hodges (2001) presented a set of 12 criteria for web site evaluation. They include:

- ***Authenticity of information***

Are information given referenced? Is it possible to verify them?

Do the writers specialize in the field?

- ***Credibility***

What organization supports the website? Who are the writers?

How is the website ranked?

- ***Access speed***

Does the website save the time? Is it loaded fast? How fast the pages change? Is this speed acceptable?

- ***Content coverage***

Are the subjects sufficiently covered? Are all the links relevant? To what extent the content of the website is relevant to its name?

- ***Updating***

When the website was updated last time?

Universal usability and availability of the website: What is the rate of access?

-

I
nteractivity

Using a valid usable interactive tool (email) is important. Do administrators receive and respond to feedbacks and criticisms? How long before an issue or question is addressed?

-

R
ealism

What are the real objectives of the website? What are the outlook and prospects of the website? To what extent the website meets its objectives? The history etc of the website should be complete

- ***Services***

Real and virtual services should be compared. Are the services equal and available for all? Are they free (This is especially the case for state-run organizations)? Do they meet the needs?

- ***Private rights***

The private rights of individuals must be respected and guaranteed. These rights must be encoded and only available for the individual owner

- ***Textual analysis and website pictures***

A website is a multimedia place and it is not only for writing texts. What is the proportion of texts to pictures?

- ***User-friendly and easy to use web environment***

Links (easy access and clear location), easy movement on the page, availability of page control and editing tools (color, font, size etc), easy to use icons, neatness of page and use of guiding tools

- ***Rank of the website by Alexa databank***

Access and users' speed compared to other websites. Statistics are based on the magnitude of the website and not its speed.

- ***Internal resourcing***

To what extent the given link are referenced to sources within the website? What about external linking?

2.4 Introducing the Websites

Here there is a list of European, Asian, and American, Australian and African airline websites:

International European Websites

1. British Airways: www.britishairways.com
2. Alitalia: www.alitalia.com
3. Air France: www.airfrance.com
4. Turkish Airlines: www.turkishairlines.com
5. Iberia: www.iberia.com
6. Swiss Air: www.swissair.aero
7. Lufthansa: www.lufthansa.com
8. KLM Royal Dutch Airlines: www.klm.com
9. Air New Zealand: www.airnewzealand.co.nz
10. Russia Airlines: www.rossiya-airlines.com

International Asian Websites

11. Emirate Airlines: www.emirates.com
12. Qatar Airways: www.qatarairways.com
13. Air India: www.airindia.com
14. China Airlines: www.china-airlines.com
15. Japan Airlines: www.jal.co.jp
16. Malaysian Airlines: www.malaysiaairlines.com
17. Homa Airline (Iran Air): www.iranair.com
18. Saudi Arabian Airlines: www.saudiairlines.com
19. Singapore Airlines: www.singaporeair.com
20. Korean Air: www.koreanair.com

Selected American, Australian and African Airlines

21. American Airlines: www.aa.com
22. Air Canada: www.aircanada.com
23. Australian Airlines: www.qantas.com
24. South African Airways: www.flysaa.com
25. Egypt Air: www.egyptair.com
26. Aires Colombia Airlines: www.aires.aero

3. Methodology and Scope of Research

This study is a functional descriptive one. It is an e-field research because it uses internet search engines for investigating the websites of the airlines in question. The surveys were designed and were completed by searching the websites of airlines. Inclusion of designing and marketing features was addressed. The validity and reliability of the instruments were checked. Also, the Delphi method was employed to enhance credibility of the surveys. The Delphi method is primarily intended to discover creative and reliable ideas or preparing appropriate information for decision making. This method is a structured process of collection and categorization of the knowledge of a panel of experts through questionnaires and giving controlled feedbacks to the answers and comments provided.

Statistical population refers to a complete collection of possible measurements or recorded information regarding the qualitative characteristics of the data collected about which we wish to make inferences. The population is the target of the research and by data collection we mean extraction of results about the population. To put it simply, statistical population is

the environment targeted by the researcher for study as well as searching in some specific data. A collection of targeted elements is called the population.

At least one shared characteristic among the participants is the essential condition of a statistical population. Owning a web site is the shared characteristic in this study which sets international airlines with websites as the statistical population. Necessity and importance of development of a website for airlines, international airlines in particular is the reason for we have focused on this characteristic.

4. Data Analysis and Results

To answer the question ‘What feature or features distinguish the websites of international Asian and European airlines from selected American, Australian and African airlines?’, we applied multiple correspondence variances process. This process is conducted in 3 stages:

First, studying the dependence significance of all marketing and/or designing features of the websites of international Asian and European airlines and selected American, Australian and African airlines by administering a series of X^2 tests; second, selecting and summarizing data with dependence significance to develop an input matrix for correspondence analysis; third, conducting correspondence analysis process on a software and creating a multi-dimensional environment to display salient features of these websites.

4.1 Analysis of Demographic Data

A total of 26 airlines were investigated: 10 European airlines (38 %), 10 Asian airlines (38 %) and 6 other airlines from America, Australia and Africa (24 %). The average scores of factors related to each feature regardless of the country of the origin of the airline could be summarized in Table 1:

Table 1. The average scores of factors related to each feature

Features	Number of factors	General Access to Website
Interaction	12	1.355
Navigation	7	1.28
Performance	25	1.26
Marketing	14	1.27

The average scores of factors related to interaction, navigation, performance and marketing features of international European airlines could be summarized in Table 2.

Table 2. The average scores of factors related to interaction, navigation, performance and marketing features of international European airlines

Features	Number of factors	General Access to Website in European Airlines
Interaction	12	1.23
Navigation	7	1.12

Performance	25	1.13
Marketing	14	1.15

The average scores of factors related to interaction, navigation, performance and marketing features of international Asian airlines could be summarized in Table 3.

Table 3. The average scores of factors related to interaction, navigation, performance and marketing features of international Asian airlines

Features	Number of factors	General Access to Website in Asian Airlines
Interaction	12	1.36
Navigation	7	1.31
Performance	25	1.37
Marketing	14	1.36

The average scores of factors related to interaction, navigation, performance and marketing features of selected international American, Australian and African airlines could be summarized in Table 4.

Table 4. The average scores of factors related to interaction, navigation, performance and marketing features of selected international American, Australian and African airlines

Features	Number of factors	General Access to Website in Selected Airlines
Interaction	12	1.54
Navigation	7	1.47
Performance	25	1.30
Marketing	14	1.32

4.2 Testing the Hypotheses

Major hypothesis 1:

- There are significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of designing features

There are also 3 minor hypotheses in this case, each comparing a separate feature. First we will employ single-variable variance analysis to test the minor hypotheses and then use multiple-variable variance analysis to test the first major hypothesis which addresses interaction, navigation and performance features and the second major hypothesis which attempts to evaluate marketing features.

Minor hypothesis 1

- Null hypothesis: There are no significant differences between the websites of international Asian and European airlines and selected American, Australian and African

airlines in terms of interactive features

According to Table 5, as significance level is 0.196 and therefore more than 0.05, null hypothesis cannot be rejected, i.e. there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of interactive features.

Table 5. Testing minor hypothesis 1

Source of Changes	Sum of Squares	df	Mean of Squares	F	Level of Significance
Between the Groups	0.358	2	0.179	1.784	0.196
Inside the Groups	2.358	23	0.103		
Total	2.716	25			

Minor hypothesis 2

- Null hypothesis: There are no significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of navigation features.

According to Table 6, as significance level is 0.263 and therefore more than 0.05, null hypothesis cannot be rejected, i.e. there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of navigation features.

Table 6. Testing minor hypothesis 2

Source of Changes	Sum of Squares	df	Mean of Squares	F	Level of Significance
Between the Groups	0.472	2	0.236	1.416	0.263
Inside the Groups	3.833	23	0.167		
Total	4.305	25			

Minor hypothesis 3

- Null hypothesis: There are no significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of performance features.

According to Table 7, as significance level is 0.212 and therefore more than 0.05, null hypothesis can't be rejected, i.e. there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of designing features.

Table 7. Testing minor hypothesis 3

Source of Changes	Sum of Squares	df	Mean of Squares	F	Level of Significance
Between the Groups	0.299	2	0.149	1.662	0.212
Inside the Groups	2.067	23	0.09		
Total	2.365	25			

In total, as significance level is more than 0.05, there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of designing features.

Major hypothesis 2:

- Null hypothesis: There are no significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of website marketing features.

According to Table 8, as significance level is 0.385 and therefore more than 0.05, null hypothesis cannot be rejected, i.e. there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of marketing features. Because of insignificance of differences between airlines, Tukey test was not administered.

Table 8. Testing major hypothesis 2

Source of Changes	Sum of Squares	df	Mean of Squares	F	Level of Significance
Between the Groups	0.232	2	0.116	0.996	0.385
Inside the Groups	2.673	23	0.116		
Total	2.905	25			

5. Discussion and Conclusion

Regardless of the country of origin, websites studied here utilize almost the full potential of internet to achieve efficient marketing. Table 9 shows that these websites have relatively high means in terms of website designing features. However, navigation and performance features demand more attention as their respective means are lower than those of designing features.

Table 9. Means of website designing features

Features	Number of factors	General Access to Website
Interaction	12	1.355
Navigation	7	1.28

Performance	25	1.26
Marketing	14	1.27

Addressing Minor Hypothesis 1

The findings suggest that there are not significant differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of marketing features. It was noticed that selected American, Australian and African airlines have relatively better interactive features than international Asian and European airlines.

Addressing Minor Hypothesis 2

The findings suggest that there are not considerable differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of navigation features. We only found out that selected American, Australian and African airlines have slightly higher scores in for navigation feature than international Asian and European airlines which is statistically insignificant.

Addressing Minor Hypothesis 3

The findings indicated that there are only slight differences between the websites of international Asian and European airlines and selected American, Australian and African airlines in terms of performance features, a fact that is highlighted by both correspondence analysis process and the related findings. It was found out that selected American, Australian and African airlines have slightly higher scores in for navigation feature than international Asian and European airlines which is statistically insignificant. Regardless of the considerable success of all participants in this case, selected European, African, Australian and American websites have more or less similar performance features and only Asian airlines have had better performances than other groups.

Addressing Major Hypothesis 1

Simultaneous investigation of combined behaviors of interaction, navigation and performance has revealed that all participants have achieved high means in terms of website designing features which could be readily interpreted as satisfactory performance. Also, all participants were similar in this case.

We only noticed some minor differences in a number of cases which indicated that African, Australian and American websites had slightly better navigation and interaction features on the whole. Moreover, as Table 10 shows, Asian airlines had relatively higher performance means than other groups.

Table 10. Means of combined behaviors of interaction, navigation and performance

Website Designing Features	Europe (N=10)	Asia (N=10)	Others (N=10)
Interaction (12 factors)	1.23	1.36	1.54
Navigation (12 factors)	1.12	1.31	1.47
Performance (12 factors)	1.13	1.37	1.30

Addressing Major Hypothesis 2

Regarding using websites which is considered an element of marketing mix and also enjoying other features of internet marketing, again the participants were similar and had no considerable, if any, differences. All subjects had satisfactory performances in this regard and there were no significant differences between them. Selected European, African, Australian and American websites had highly similar performance features and only Asian airlines had better insignificant performances than other groups.

6. Suggestions and Recommendations

Based on the findings of the study, the following suggestions and recommendation were made:

- Designing customer-based website while focusing on viewpoints of customers via online surveys
- Considering marketing features such as possibility of online payment, reservation by e-mails, charter reservation systems and using network and internet advertisements
- Promoting functional features such as audio and visual capabilities, logs and graphs of flights, sending notification messages about regulations of the agency and provision of air industry information
- Linking to other relevant organization and offers of complementary information to customers using external links and shared marketing initiatives

There were also some suggestions for enhancing the efficiency of international airlines websites

- Some of the features investigated here have been seen to be far from enough in some international websites.
- It is necessary for the owners of airlines to have a motto, use organizational charts and express their perspectives and missions to instill organizational character into their websites.
- Offering information about customs, internal regulations of agencies, safety precautions and introduction of airplanes could contribute to maintenance of sustainable relations with customers.

The following suggestions were also made for future researchers:

- Conducting similar researches on other institutions and enterprises, service section in particular
- Looking into variables or features of website designing which may indicate a specific strategy to internet marketing of airlines
- Developing mechanisms to integrate viewpoints of designing experts with those of marketing specialists due to existence of well-established links between marketing and designing features
- Investigating how variables of marketing and designing features are related to attraction of more customers

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