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WEB DESIGN: A KEY FACTOR FOR THE WEBSITE SUCCESS

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ABSTRACT

Purpose- Web design is a key factor for the recognition and success of the websites and electronic commerce. We scrutinise from a marketing point of view the leading aspects that could stimulate online users' opinions and behaviours, in order to attain a successful e-commerce website.

We developed an all-encompassing literature review accentuating the special role that web design could play in the collaboration user-interface. Besides, the methodology associated with benchmarking sanctions firms to learn some key lessons and to know the best practices for developing their businesses online.

The literature review lets us to assert that web design is a key factor for accomplishing positive outcomes as it stimulates on online consumers' and users behaviours and opinions. A website design make a speech to freedom and simplicity of triangulation provides accurate, timely and clear information in all its contents and a presence those pleas for the users' attention.

Research limitations/Implications - We assist a Decalogue of strategies that could advance the design of the e-commerce websites concerning the tempting appearance of the website, the information and contents, the navigation through the site and the selves of the shopping procedure.

This is one of the first lessons which elucidate how a website should be designed from the demand's viewpoint.

Keywords: *web design, marketing, e-commerce.*

I. INTRODUCTION

In the last few years, the Internet is being industrialised with an excessive growth as a new commercial channel. In a market with a aim of million people and more than 80 thousand million dot-com websites in the world (Domain tools, 2018), the prospects of trading are nearly immeasurable. Thus, a great upsurge of competency is befalling, and firms are inquisitive what they should do in order to acquire the paramount results.

The initial point of the answer could be by indulging what user's famine. For this reason, there has been rising a great body of research engrossed on the factors that mark the attainment of an e-commerce website from the users' perception. In this line, many studies have identified the web design as a key factor for the development of a good interface to satisfy consumer needs. A good design is relevant for companies to survive in the extremely competitive World Wide Web (e.g. Ranganathan and Ganapathy, 2002; Liang and Lai, 2002; Tan and Wei, 2006).

This research is concentrated on the foremost analysis of the perceptions within the marketing castigation. These research lines are enthused by the consecution of efficacious boundaries which generate positive answers on. Thus, the web design is essential in order to obtain high levels of gratification with the website (Kim and Eom, 2002) or to upsurge the online purchase objective of the consumer (Swaminathan *et al.*, 1999).

In spite of the prominence that web design has for the development of up-and-coming virtual stores, it seems notable the relative lack of harmony in the literature about how the factors that constitute the design of the website have to be achieved. In this way, we aim at finding answer to the ensuing research questions:

RQ1: What are the primary factors that affect the achievement of the e-commerce websites from a consumers' sight? What is the role frolicked by web design?

RQ2: Which are the main features of good web design practices conceded out by prosperous virtual stores?

Taking these objectives as a reference, in the two resulting sections we point out a literature appraisal regarding the key factors of an efficacious website, analysing the significance of the website design. The next epigraph advances the key guidelines for the attainment of the online businesses and finally, this study grants the discussion and conclusions associated to this interesting topic.

II. THE RELEVANCE OF WEB DESIGN FOR THE E-COMMERCE

The design of websites has been broadly studied from numerous points of view, most of them have recognized the factors that could conclude the degree of acceptance of the websites (e.g. Hoque and Lohse, 1999; Kim and Stoel, 2004; Wilde *et al.*, 2004 ;). According to Cato (2001, p. 3), designing is “the procedure of crafting an artefact with structure of form which is artefact, planned, artistic, coherent, useful and purposeful”. From a consumer viewpoint, a website must be premeditated with all these characteristics in order to stimulate the affective states of the users and to enhance their online coherent or visits purchase intentions.

As the Electronic Commerce and the Internet are embryonic, different points of view are arising to conclude which can be the key factors of website design. In this sense, functional studies what rudiments must have a website so that the consumer can handle it easily. Nielsen (1994) defines the usability of a website as the easiness with which the user can learn to handle the system and memorise the essential functions, the effectiveness of design of the site, the level of error escaping and the general contentment of the user. More purposely, the usability is a quality element that assesses how simple user interfaces are to use, and we can recognize five dimensions or quality attributes: learn efficiency, ability, errors, memorability, and satisfaction (Nielsen, 2003).

The availability can also be implicit as a tool for measuring the eminence of a website (Ranganathan and Ganapathy, 2002). Thus, the easiness of use of a system could get better a more multifaceted learning and a higher capability to wait how that system will perform. Particularly, usability improves the best perceptive of the contents and tasks that the consumer has to recognize for the attainment of a goal (e.g. to place an order). This reduces the likelihood of error and improves the levels of trust (Muir and Moray, 1996). Besides, usability is related to the consumer ability to identify where a customer is and what he can do in every moment of the navigation.

With reference to the design factors of a website, a good quality design must provide not only appeal and beauty, but also sky-scraping levels of usability, since it persuade the eloquent states of the user (Desmet and Hekker, 2007). Thus, an elegant website should make sure a high level of usability (Cristóbal, 2006). An eye-catching design can evoke opinion of pleasure in the use of a website (Flavián and Gurrea, 2008). As a upshot, an ample degree of usability, associated to a comfortable atmosphere, could generate a positive bias in the consumer. In fact, a good level of superficial usability could lead to higher levels of satisfaction, trust towards a specific website (Flavián *et al.*, 2006; Kim and Eom, 2002; Chen *et al.*, 1999).

Regarding commercial business, users may wind up a higher eminence of a product from its beauty which in turn entails higher levels of usability (Desmet and Hekker, 2007). So, we could note down herein that usability and web design are highly correlated. Table 1 shows some of the foremost studies that point out the subsistence of a clear relationship between the concept of usability and web design.

With this regard, we could hassle the study carried out by Keeker (1997) who anticipated several guidelines in order to develop the ease of use of the website and to persuade people to enjoy and become affianced in an experience. The author based his hypothesis on a well-known group of online firms to identify the key aspects and to proffer some recommendation associated to the contented of the websites (such as the information, the use of media - sound, animation, graphics-), the easiness of use (provide goals to navigation, users, feedback), the endorsement of the content (i.e. location, frequency of updates), the precise contented related for the media (i.e. customization, community) and the sentimental response of the consumer.

Table 1. Web design and usability

Author(s)	Factors	Aims	Methodology	Results
Keeker (1997)	Content Quality Ease of Use Promoting Content Made for the Medium Content Emotional Response	Analyse of usability and marketing research on the Microsoft Network (MSN)	Cases Study	Guidelines for the designers in order to improve: Usability Appeal
Benbunan (2001)	Content Navigation Interactivity	Evaluate the e-commerce website usability	Protocol Analysis (experiential evaluation)	Problems related to website content, navigation and interactivity Importance of offering an efficient navigation in order to achieve the user pleasure Better usability does not imply preference for a website, but it results in a more successful interaction and may help the user to make a purchase
Agarwal and Venkatesh (2002)	Content Ease of Use Promotion Specific Content Emotion	Develop an instrument for measuring the usability of a website (Design as a key tool, based on Keeker, 1997)	Heuristic Evaluation: Group of experts Questionnaires to users	The salience of usability characteristics depends on the user task and industry In general terms, the content characteristics are the most important
Palmer (2002)	Download Delay Navigation Content Interactivity Responsiveness	Develop and validate website usability, design and performance metrics.	Longitudinal study of corporate websites: jury (users role) third-party ratings software experts	High correlation between web design, usability and media richness for the success of a website Website success measures: Usability: download delay, content, navigation Media richness: interactivity and responsiveness
	Title Format	Examine	the Cross-cultural (Japan,	Causal relationship between website

Hu, Shima,	Title Position	relationship between the audience impressions and the visual	China, UK)	usability and visual design perceptions
Oehlmann,	Menu Size	style of a website.	Self-reported questionnaires	Significant differences in subjects' perceptions depending on the country and the characteristics of
Zhao, Takemura and Matsumoto (2004)	Clipart Size Background Colour	Identify cultural differences on website		the user Trade-off between different design combinations to create an optimal visual design
Zviran, Glezer and Avni (2006)	Usability User-based Design: Content Navigation Search Performance	Investigate the effects of usability and user-based design on the user satisfaction	Online survey Perceptual maps	Differences in the effectiveness of the variables depending on the task and the type of purchase Highest satisfaction for online Shopping and customer self-service websites.

Source: Own research (2018)

In a similar way, Palmer (2002) validated and proposed measures of websites' design and usability, identifying features related to the response time (download delay), the association of the contents (navigation), and the contents and information of the website (content). The research also recognized that the description of the media opulence, such as the capability of the website for customizing the manifestation and the contents (interactivity), and the existence of feedback between the consumer and the vendor, were determinants of the accomplishment of a website.

In this sense, Van der Heijden and Verhagen (2003) examined the image essentials in a virtual store that could enhance the purchase purpose in the user, identifying the factors of design as the for most part important. We can also take into describe the study carried out by Kim and Stoel (2004), who established that the factors of website manifestation can lead to higher consumer contentment (see Table 2). The development of a good website design turns into a key question, since it will conclude the entry of the consumer to the store (Melián and Padrón, 2006).

Into the website design, the literature has also exposed that visual aspects play an important responsibility for the website success (see Table 2). Specifically, Dailey (1999) and Eroglu *et al.*, (2001) scrutinize the authority of web atmosphere on consumers and verified that the insights of this atmosphere persuade the cognitive and sentimental states of the consumer, and as a significance the acquire performance towards the website. Tan and Wei (2006) proposed that the emergence of the website is an instrumental factor that improves the discernment of information in order for subjects to perform better cognitive mapping and enhanced estimation of the decisions for carrying out. More specifically, these authors propose that the graphical illustration such as icons, images, colours and animations, give website a higher vibrancy. This fact could advance the degree of individuals' contentment with the web page and the navigation ambience (Zhang *et al.*, 2000).

Table 2. Web Design and elements of establishment atmosphere

Author(s)	Factors	Aims	Methodology	Results
Eroglu, Machlot and Davis (2001)	Atmospheric elements of the online store	Analyse the influence of the atmospheric cues on the cognitive and affective status of the user	Development of a theoretical model based on the S-O-R paradigm (stimulus, organism, response)	The online retail store's environment is divided into two categories: high task-relevant information and low task-relevant information (stimulus) Theoretical and practical review from the perspective of atmospherics
Liang and Lai (2002)	Motivation factors Hygiene factors Media Richness factors	Examine the effect of the quality design of the online store on the purchase decision	Experiment ANOVA Experts and consumers	Best considered elements for purchasing through the Internet: security, search engines, easy to sign up, home delivery and product organization Consumers are more likely to visit and purchase at well-designed stores
Van der Heijden and Vohagen (2003)	Usefulness Enjoyment Ease of Use Store Style Familiarity Trustworthiness Settlement Performance	Develop a scale for measuring the quality of the online store image	Method of development of scales proposed by Churchill G. (1979) Experiment with students	The attitude towards purchasing online can be explained by four dimensions: trustworthiness, settlement performance, usefulness and enjoyment Ease of use, store style and familiarity had no significant effects
Kim and Stoel (2004)	Web Appearance Entertainment Information Fit-to-Task Transaction Capability Response Time Trust	Determine the dimensionality of the website quality (1) Identifying which dimensions were significant predictors of the consumer satisfaction (2)	Questionnaire to female online shoppers Principal component analysis (1) Structural Equation Model (2)	Multidimensionality of the website quality Information fit-to-task, transaction capability and response time are significant predictors of the consumer satisfaction
Richard (2005)	Navigational Characteristics Structure Effectiveness of Information Content Informativeness Organization Entertainment	Explore the surfer behaviour and the user purchase intention (based on Eroglu et al., 2001)	Structural equation model	Navigational characteristics affect positively on purchase intention Direct relationship between website involvement and purchase intention Significant relationship between website attitudes and the degree of involvement
Khakimjanova and Park (2005)	Presentation Technique Supplementary Presentation Aesthetics of Presentation Display Structure and the Layout "Classical" aspects "Expressive" aspects	Explore the practices of visual merchandising among the online stores, differentiating on the type of business	Exploratory survey of 32 websites (Top 100 of the magazine Stores)	The authors identify strengths and limitations of the websites There are no differences between "click" and "click-and-mortar" stores There are differences between specialty and department stores
Tractinsky and Lowengart (2007)	"Classical" aspects "Expressive" aspects	Examine the role of aesthetics in the online Businesses	Theoretical model based on the Elaboration Likelihood Model (ELM) (Petty and Cacioppo, 1981)	The user and design characteristics influence the perceptions of the aesthetics Different aesthetic design implications, depending on type of user, purchase and product Differences effects derived from type of product, industry and consumer

Source: Own research (2008)

So, a mammoth part of the literature clarification the connotation of aspects such as an suitable appearance, the easiness of use, the easiness for navigation, the solitude and security or the content and information. These factors are determinants of consumers' performance and consequently, of the website hit in the e-commerce context. However, it seems astonishing the comparative lack of consensus in the literature about how those factors has to be controlled. Consequently, it seems essential to develop a series of guidelines in order to design edges that persuade the users and organizations' needs.

III. GUIDELINES FOR THE SUCCESS OF ONLINE BUSINESSES

Intriguing into account the high antagonism in the new electronic environment and the mounting interest of e-businesses in developing websites which please the users as much as possible, this research intends a series of guidelines in order to put forward adequate structures and design of the websites.

In this line, the literature reconsider allows us to state the significance of web design in order to get positive conclusions in the electronic commerce context. However, accomplishing an efficient design is not an easy task. There are a lot of factors to take into account, not only in conditions of design itself, but also in terms of possible costs plagiaristic from the implementation and continuation of the website, and the possible losses in the download

speed because of the use of design tools. It emerge a challenge for e-businesses, since the inadequate dimensions of the computer screen imply that designers have to carefully supervise the design substitutes, displaying the alternative that replicate the essence of the website in the best way and gratifying the users and consumers' needs. Bearing in mind all above, this research could offer some recommendations which may lead in a right way the efficiency of a website. Firstly, given the fact that the shopping window is similar to as the computer screen in an e-store (Eroglu *et al.*, 2001), it seems realistic to embark upon the websites' navigation and appearance cues:

The managers of the website design should make an effort to offer a navigation characterized by simplicity (Gehrke and Turban, 1999), and in addition that it allows to users a certain degree of freedom (Lorenzo and Mollá, 2007). In this way, the possibility of taking pleasure in a free navigation leads to consumer's positive outcomes, such as high satisfaction with the website and a higher purchase intentions (Richard, 2005; Zviran *et al.*, 2006).

The addition of sophisticated search engines in the websites is a key aspect highlighted by the specialized literature for improving the users' valuations of a website (Liang and Lai, 2002). The managers of websites should take care on the efficacy of their search engines, offering timely and precise answers to the consumers' requests. Thus, the online store Amazon.com (www.amazon.com) represents a good example of competent search engines, allowing users to search for products in every page of the site and offering superior search functions for products' subcategories and categories (see Figure 1).

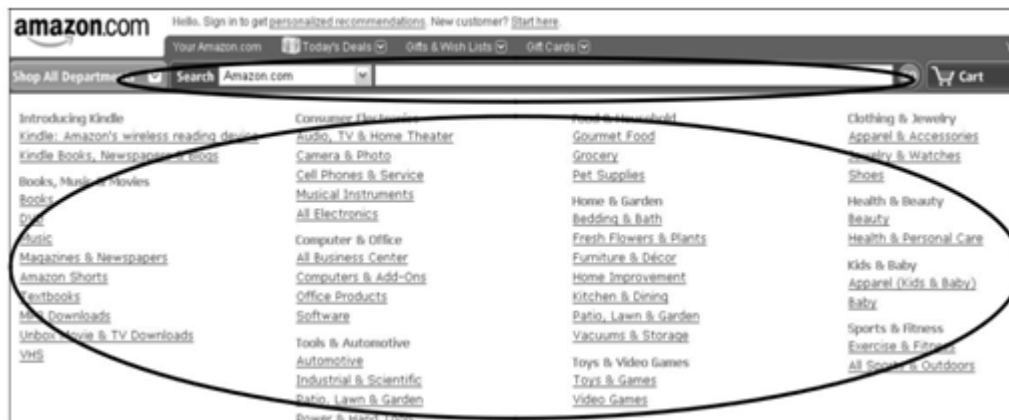


Figure1 . Amazon search functions (www.amazon.com)

Furthermore, the websites should endow with a good level of download speed (Lohse and Spiller, 1999) of the page. In this sense, a more downloading time, plagiaristic from overloads in the contents or even in the use of images, could show the way to users to pass up the website and leave it. Thus, it is essential to get a well-balanced stability between the emergence of the website and its downloading speed.

In this way, the opportunity of controlling in which place and instant the user is during the navigation has curved into a key factor for getting better the use of a website. A simple aspect such as incorporating a back button is highly valued by the users. Similarly, the occurrence of a map of the site is specially considered by the more knowledgeable users. Besides, the potential of the website to offer an proficient shopping process, displaying a process step-by-step in a clear and easy way (Gehrke and Turban, 1999) has been exposed in the literature as another key aspect for influential consumer behaviour (Eroglu *et al.*, 2001). In this line, we could bring up the case of Dell's online shop (www.dell.com), where the user knows where he is at each moment of the navigation. Moreover, the shopping progression is displayed in four simple visually stages. All these quality allow a high control by the user during the purchase and the navigation process (see Figure 2).

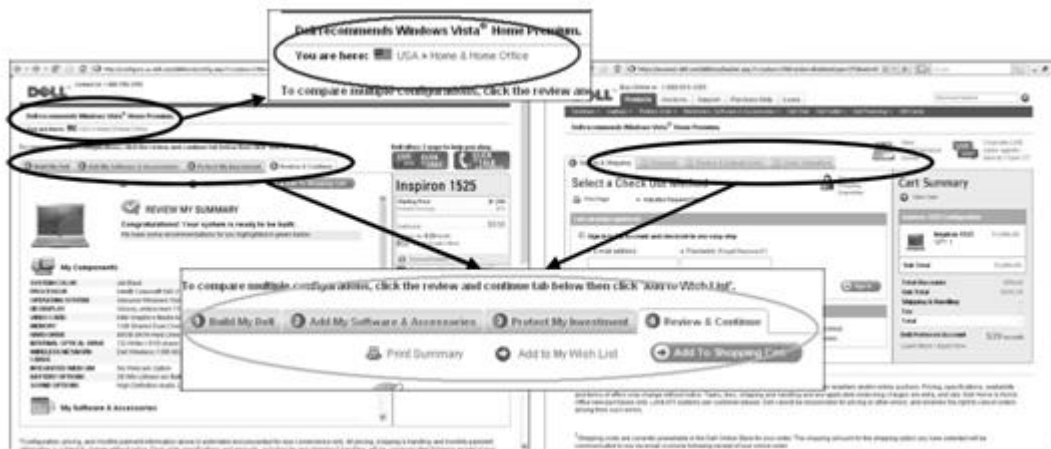


Figure 2. Dell shopping process (www.dell.com)

The emergence of a website, in terms of store aesthetics, has also to be considered for attaining a productively website design. In this way, the first intuition of a website determines the user evaluation of that website (Tractinsky and Lowengart, 2007), so that influences on his perceptions and behaviours (Hu *et al.*, 2004). Specifically, the aesthetic aspects could affect the consumer in a great extent, such as on the satisfaction with the website as well as the shopping motivations (Zhang and Von Dran, 2000). According to Liang and Lai (2002), a consumer tends to purchase more in well-designed websites. Besides, the artistic appearance of a website becomes a determining method of the website dependability (Fogg *et al.*, 2002). In this line, a bad-designed website may symbolize a good reason not to shop on that website (Jarvenpaa and Todd, 1997). Thus, the management of visual characteristics is exposed as the main tool in order to advance the attractiveness of a website. As a consequence, the development of a website with a good use of graphics, images, icons, colours or animations, may represent a potential source to offer a more colourful website and to get a upbeat response of the consumer (Zhang *et al.*, 2000; Lee and Benbasat, 2003; Görn *et al.*, 2004).

As vital as a adequate structure of the website, is also a good content that could be proficient to satisfy the needs of the online consumer. Thus, it emerges interesting to examine the cues related to the content bestow with by the website. Managing and organizing the information long-established in a website in a dexterous way could become another key issue in order to bring about the success of an online business. The design managers should take into account the content of the information that they endow within the website. In this sense, we could consider the need to proffer quality information as a significant factor to get high levels of users' satisfaction (Agarwall and Venkatesh, 2002; Kim and Stoel, 2004). Specifically, the efficiency of the information content affects the user's degree of involvement and improves his purchase intention (Richard, 2005). Consequently, it seems recommendable to exhibit the contents with timely, modernized, understandable and pertinent information.

The information associated to the shopping progression has been emphasized as another vital aspect in order to accomplish an effective e-commerce website, as Schubert and Selz (1999) indicated. More specifically, the designers should take care of the information eminence related to the products and services supplied in the e-store (Huizingh, 2000) and to proffer any additional information that could be helpful for the consumer (Lohse and Spiller, 1999). Besides, the e-businesses should stress the importance of the security and privacy concerns along the commercial transactions (e.g. Torkzadeh and Dhillon, 2002; Ranganathan and Ganapathy, 2002). In this way, the low cost airlines' websites, such as Clickair (www.clickair.com), could be painstaking a case of good practices. This website put forward information not only related to the conditions of the flights, but also with accommodation at the destination, transport to the airports or even the possibility of renting a car once the traveller has at home to the destination (see Figure 3).

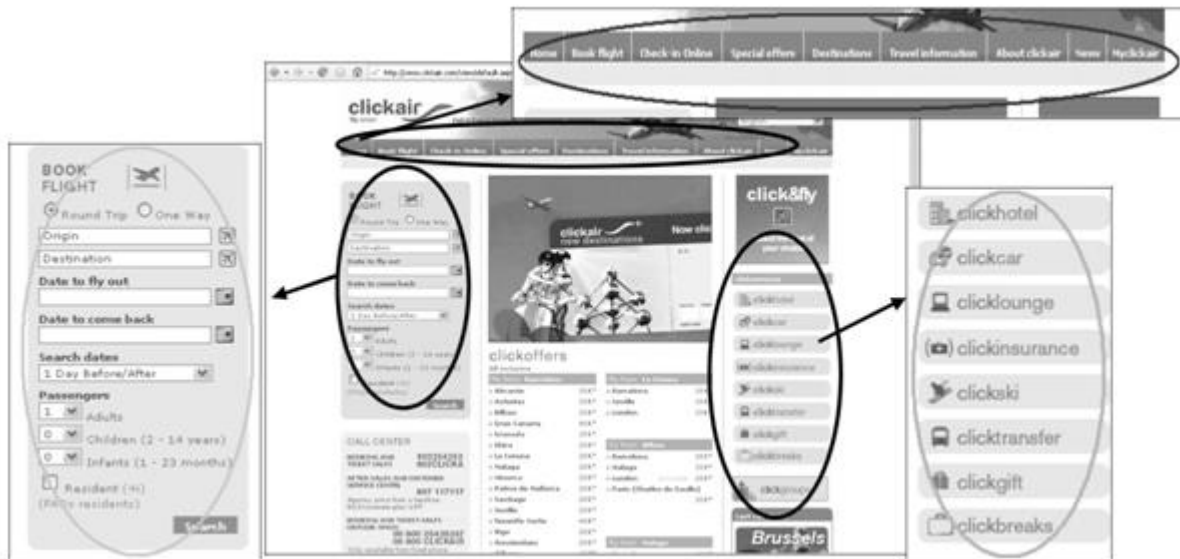


Figure 3. Clickair front page (www.clickair.com)

In this way, the visual characteristics play an important role. On one hand, the use of product images with a proper size and quality becomes a key question so that the user could attain a better knowledge about the product (Lee and Benbasat, 2003) and could make a more well-organized shopping decision. Besides, the interactive visualization tools (e.g. motion and animations) may create a better match between the task and the decision environment, which improves the quality of the information and reduces the effort required (Erick and Wills, 1995). Thus, we could point out the case of the Nokia's website (www.nokia.co.uk), where the use of high-quality images and the availability of a 360° view stress the beauty and quality of its products. This fact allows users to see all the visual details that imply greater amount of information and therefore a better knowledge of the product (see Figure 4).



Figure 4. Nokia product presentation (www.nokia.co.uk)

IV. CONCLUSIONS

In the last years, the growing development of the Internet is associated to an tremendously competitive context. This research has determined on the dedicated literature and empirical indication about the main factors which influence the levels of success of the companies in the electronic commerce. More distinctively, it is feasible to emphasise the aspects related to websites design.

The first research question offered in this study referred to the recognition of the main factors that influence the achievement of the e-commerce websites from a consumer's point of view. The literature reassess allows us to affirm that web design is a key factor for attaining positive outcomes as it influences on users and online consumers' observations and behaviours. In this way, the design of websites represents an outstanding framework for online firms to generate users' satisfaction, trust, and positive aim towards the website. In particular, we have barbed out the link between web design and usability in order to make it easier for users to navigate through the website, allocating them to organize their own tasks and giving them freedom opinion during the navigation. Besides, the magnitude of web atmospherics has been exposed to attract users' attention to the website, to advance users' knowledge about the company's offering and to persuade users' purchase target. Therefore, the task played by web design is decisive for getting website's success. In addition, we have stressed out several examples of superior design practices in order to find out which are the foremost features related to web design performed by successful effective stores.

Nevertheless, it seems realistic to propose that there is not a unique most favourable design, since it depends on the type of product commercialized, the type of user that is frontage of the screen, or even on the geographic location where the website is being visited. All these factors could establish the success of a given website. In general terms, users are more inclined to visit and/or purchase in well-designed websites (Liang and Lai, 2002), but there are diverse combinations which could lead to the manufacture of an optimal design (Hu et al., 2004).

Despite this fact, we could squabble that a website design addressed to freedom and simplicity of navigation offers clear, timely and precise information in all its contents and amanifestation that calls for the users' attention. This may lead to a essential store with high probability of success. Besides, the characteristics related to the security and privacy must be considered in every time and place of the website.

In this context, this paper propositions a series of guidelines in order to establish the key features for the achievement of high levels of success of online business. Thus, we offer a Decalogue of actuaciones that could advance the design of the e-commerce websites (see Table 3). This Decalogue could be particularly useful for designers in order to establish the basic elements that must be careful when designing a website. More concretely, we have noticed that online users' point of view has to be prominence in every aspect of the websites; thus, the dimensions identified in this series of suggestions establish the basis to influence online users' discernments and behaviours, and therefore to determine the website' success.

Firstly, it seems realistic to take into account the aesthetic manifestation of the website, since the first impression will determine the relationship between the consumer and the firm (Robins and Holmes, 2008), so a bad designed website may represent a good reason not to shop on it. Secondly, the navigation throughout the website has to be considered, especially presence to the possibility and the simplicity of controlling by the users, which improves the ease of use of the site and the belief of freedom during the navigation. Thirdly, e-firms have to carefully manage the information and contents of the website, displaying good quality information in adequate forms. Lastly, the descriptions of the shopping process have been publicized as a critical characteristic for the achievement of a successfully e-commerce website. It would be pleasing that designers try to standardize the stages of the shopping process in order for users to better know and learn the commercial process in the Internet and may experience more self-confident to purchase a product.

Table 3. Decalogue for improving the websites' design

Dimension	Guidelines	Tools
Appearance	<ol style="list-style-type: none"> 1) Launch a good appearance is important for getting high levels of credibility in the website, which leads users to trust. 2) Offer vividness in the website to get a positive response by the consumer 3) Find a well-balanced equilibrium between the aesthetic appearance and the download speed 	Visualization Tools <ul style="list-style-type: none"> - Images - Graphics - Icons - Animations - Colours...
Navigation	<ol style="list-style-type: none"> 4) Offer a navigation characterized by simplicity 5) Allow users to control where he/she is in every moment during the navigation and what he/she can do 	Map of the site Backward button Search engine
Content	<ol style="list-style-type: none"> 6) Organize and manage the contents in a clear way making ease the search of information 7) Provide quality information/contents 	Information: <ul style="list-style-type: none"> - Updated - Comprehensible - Relevant Visualization tools: <ul style="list-style-type: none"> - Product images with proper size and quality
Shopping process	<ol style="list-style-type: none"> 8) Offer an efficient and easy shopping process 9) Provide quality information of the products and services offered 10) Emphasise privacy and security aspects 	Shopping process step-by-step (no more than five stages) Links with useful information for the purchase (related products, overviews, additional information) Privacy and security information in all the stages of the shopping process

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