

E-COMMERCE ON DIGITAL INTERFACES: IDENTIFYING ERGONOMIC ISSUES

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1 Context

The expansion of electronic commerce is mainly due to the introduction of broadband in Brazil in 2003 and more recently to the popularization of smartphones with Internet access, when at the end of 2007, the 3G services were made available in the country. The worldwide network of computers has been increasing significantly, including access via mobile devices. According to data from the IBGE, in 2014 80% of households connected to the Internet, do so using mobile devices. It can be considered that designers do often not take issues involving usability into account, the needs of the user are being ignored (MIRANDA, 2004), especially when concerning the purchase of clothing.

In this segment, the user/consumer has no direct visual nor tactile contact with the product and are unable to 'try it on' either. This is considered a disincentive to online shopping for 84% of users, according to Sebrae ("Relatório de Inteligência", 2015). However, even in the face of this barrier between the real and the digital, in 2016, according to the Webshoppers report (E-BIT, 2017), the fashion and accessories sector was the leading segment in terms of volume via e-commerce in Brazil. This indicates the potential for expansion of this market, benefiting the Brazilian economy and industry.

A site must be tailored to the needs of the user. If it is being accessed from a mobile device, the suitability and the needs, as well as the various contexts in which it is inserted, must be considered. ISO 9241-11 (ABNT, 2002) defines usability as: "extent to which a product can be used by specific users with effectiveness, efficiency and satisfaction in a specific context of use." The ISO definition treats usability not as an isolated quality of a product, but rather with its dialogue with the user, the purpose of the task it is performing, and the environment where the product is embedded. (CHAMMAS; QUARESMA; MONT'ALVÃO, 2013 and JORDAN, 2001). Lack of usability can cause problems whose consequences both annoy or frustrate a user and negatively impact their experience.

Usability, when considered appropriately, will mitigate doubts in the user's navigation. That is, at the time of designing a site, the designer must include in his assignments a checklist of questions about the clarity of understanding on the part of the user (KRUG, 2006). It is relevant to develop diagnostics and develop strategies that can contribute to the most efficient, effective and satisfactory site designs both for access via mobile devices and for access via desktops.

2 Method

To achieve these objectives, the following research methods and methods were used:

- Bibliographic survey;
- Narrative and systematic literature review;
- An exploratory interview with a sample of the studied population;
- A semi-structured interview with fashion specialists;
- A questionnaire and
- A research to select which website should be used for the case study.

This stage of the dissertation was considered the exploratory phase of the research, with the aim of providing greater familiarity with the problem, with a view to making it more explicit or to constitute hypotheses (GIL, 2002).

The exploratory interview assisted in the elaboration of the questionnaire by raising critical points that impact the decision-making process of users when buying clothes online. To obtain the opinion of specialists in the area, a semi-structured interview was conducted with the intention of elucidating questions about the research topic and using this information to later elaborate a usability test with the users.

From the information gathered in this first phase, it was possible to elaborate the problems of this research, which are as follows:

1. What are the difficulties a user faces when trying to buy a garment?
2. What information about a product must be presented on a website to overcome the lack of physical contact?
3. To what extent is usability being considered as a guideline, taking into account the characteristics and singularities of the devices?
4. How does usability impact on the user experience?

3 Results

Exploratory interview

The results of the exploratory interview were divided in three categories:

- Trust
- Price
- Delivery.

Questionnaire:

205 people answered the questionnaire, most of them women (68.5%). 48% of the respondents had completed post-graduation.

Of those interviewed, 99.5% stated they had already purchased online, (51% women and 49% men), and 0.5% never bought online.

Regarding the reason people buy online, highlight the practicality and ease of comparing prices, 83% and 75%, respectively. 52% buy because of the lower prices.

Contrary to Webshoppers, the category most purchased by users of the recruitment questionnaire is books / signatures and magazines (66%), the fashion and accessories category appeared in 3rd place (52%).

65% of the respondents stated they had already bought clothes online and 75% had already made purchases online using a cell phone.

Of the 45% who do not buy clothing online, the main reasons that prevent them from buying are: not knowing if clothing will fit (81%) and insecurity about the trim (87%). The table below shows all the reasons and their results.

Interview with fashion specialists:

The interviews were analyzed using the Content Analysis method it is a set of methodological tools that apply to extremely diverse "discourses" (BARDIN, 2011).

Among the most mentioned context units are: "Standardization" and "Information".. The first unit is related to the different references in which Brazilian modeling was based. According to experts, as the anthropometric studies took time to be developed in Brazil, several foreign sources were searched resulting in numerous tables with different measures and without considering the specificities of the bodies of the Brazilians. *"If you go to the market today to look for bibliography of modeling translated into Portuguese you will find a multitude of books in which already presented in the material is not standardized, it has differentials in the presentation of the names of the measurements, in the way it is measured."*

The second registration unit, "Need for standardization" there were some quite different opinions among the experts, some advocate the standardization of the tables of measures so that the marks follow the same numbering *"Today we are dealing with*

the e-commerce, which without standardization has no way to go to market and retain customers, when buying products online”.

Others do not find it necessary to have a standard of measures *“... today I do not believe that this standard is more necessary”*. And that each brand should create its measurement chart *“I think it's really cool for every brand to create yours, your table, your patterns that you follow there so, of course, it's just going to do that by watching its audience.”* And there are still those who believe that standardization is not possible *“So about the possibility of standardizing, meeting the needs of all the types of female bodies in our country, is impossible. But what we have to take into account is the possibility of trying to standardize as little as possible.”*

The "Information" context unit generated 6 registration units, highlighting *“Information and transparency for the consumer”* with almost 55% of occurrences. In the view of some experts, a brand may not have a standard measurement table, but it needs to tell its users what measures it is using. *“If the brand identifies that it wants to serve a specific target audience, the only thing it has to be is clear ”, “ ... each company could make its (table), of course being sensible, transparent not to sell something that does not fit.*

4 Conclusions

Lack of trust is the main barrier consumers face when buying online, especially concerning fashion websites. This factor in the user's interaction is related to the hedonic qualities, that refer to the perceived ability to support the user in achieving goals of being or being related to UX and to the pragmatic qualities that refer to the perceived ability of the product to achieve goals of doing, related to usability (HASSENZAHN, 2007).

The segment of fashion and accessories despite being the leading segment in sales volume was in 6th place in financial volume (E-BIT, 2017). This number indicates that consumers spend less per purchase, corroborating the verbalizations of the exploratory interview, suggesting that the low price addresses the risk perceived by the user. In addition, studies have shown that users are willing to risk more by acquiring products with a low monetary value (KIM & BENBASAT, 2009)

The perception of risk is mainly due to the lack of confidence of the user in relation to the sizes of Brazilian clothes, that according to the experts interviewed do not follow the same reference of measurements and the result are pieces do not follow a standard. The fear of a garment not being the right size is increased by the lack of tactile contact characteristic of online shopping and the lack of complementary information, such as the dimensions of the product, material used and exchange policies, which could bring more security to the user. There is clearly a gap between the demands of the user for a standardization of the sizes and the opinions of the experts, who do not

believe that a national standard of measures is necessary. Some specialists believe that each brand can create its own measurements.

Lack of trust in the system, in some cases, prevents the task from being completed. In addition to affecting usability - efficiency, effectiveness and satisfaction – the disparity in the Brazilian measurement system and the lack of product information affect user experience. UX, an abbreviation of the term, encompasses all aspects of the end-user's perception of interacting with a company and its products and / or services (NORMAN; NIELSEN, [s.d.]). This perception includes the effectiveness, efficiency, emotional satisfaction and quality of the relationship of the company that created the product or service (KUNIAVSKY, 2010)

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