A New Design Strategy to Increase Usability in E-commerce Web Sites

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Abstract:

The usability issues in some of the website design refer to aspects of a website that hinder its intuitiveness and ease of use, Complicated or inconsistent navigation system makes it difficult for users to find the information they need, and accomplishing the online purchasing process easily and securely in E-commerce websites , from this point the research problem arose, where there a crucial need to have a specified design strategy to be followed and applying the stye tile to achieve visual consistency to enhance the usability in the E-commerce website designs, The aim of this paper is to Present a new Design Strategy with a specified steps for E-commerce websites and Apply the Visual Consistency using Style tile to enhance the Usability in E-commerce websites. This paper followed the experimental approach by designing E-commerce website for an Egyptian brand for headscarf following the steps in the proposed design strategy and designing a style tile to be applied in the layout of the website to achieve visual consistency, then present this design to test the usability to a focus group of the potential users of the website to obtain the results, the experiment showed a satisfactory impact of applying the steps of the proposed design strategy and applying the style tile as an effective way to achieve visual consistency which enhance the usability in E-commerce websites. Interactive Design is characterized as an area of research that prioritizes user-centric approaches in order to effectively convey media through collaborative procedures involving individuals and software. The primary emphasis of interactive design lies in the development of captivating interfaces that exhibit carefully crafted functionalities. E-commerce Websites with cluttered layouts overwhelm users and make it challenging to focus on important content. Excessive use of advertisements, excessive text, or unnecessary graphics can hinder usability. E-Commerce website design needs a lot of steps including the good integration between user experience and user interface in order to establish the appropriate usability toward the user and to build a good interactive experience between the user and the website this paper will introduce a proposed design strategy with a specific step to accomplish intuitive and visual consistent website designs to increase and enhance usability.

Problem Statement: The problem of this research can be summarized in the following questions: 1- Will the proposed design strategy for E-commerce websites improve its usability? Does applying the stye tile to achieve visual consistency enhance the usability of the E-commerce website designs? Research aims: The research aims to: 1- Presenting a new Design Strategy for E-commerce websites to improve usability .2- Applying the Visual Consistency using Style tile to enhance Usability in E-commerce

Research hypotheses: The research assumes the following: Following the proposed Design Strategy steps will decrease the usability issues in E-commerce websites. Designing a style tile to achieve visual consistency will improve the usability in E-commerce websites.

Research Methodology: The research relied on the experimental study by proposing a specified steps for a new design strategy to design E-commerce Website for an Egyptian brand and measure its impact on usability through a focus group as a qualitative approach to obtain the results.

Discussion: This experiment aimed to evaluate the efficiency of the proposed website design with the followed design strategy to enhance usability -Regarding time consumption the personas who are in younger age were able more to interact with the design and accomplish the whole purchasing process successfully and quickly, the gender also played an important role in this experiment as the younger females could quickly choose and purchase from the site in a less time than males. - From the observation of the facial expressions of the focus group members most of them had a neutral facial but when it comes to the older members of the focus groups it was noticed that they have a confusion facial especially when it comes to enter the payment information and when she had been asked about the reason she answered that she is a beginner to make online purchasing process through a website and she always ask her daughter to purchase , also one of the male had a wonder facial expression during the experiment and after asking about the reason he answered that he can't chose the perfect scarf as rarely enter a websites for a female scarfs. 5 out of 6 from the focus group members agreed that the design is intuitive and the purchasing process is easy to use the only person who found difficulties while interacting with the website was the older one, she couldn't finalize the payment method as she told us that she can't enter the credit card number and she always ask a help from her daughter. Regarding colors and the way of its usage in the interactive features most of the focuse group members found that the colors are related to the brand and it is also helped them to see the buttons and interact with them easily the also found the colors of the website appealing and matched with the log. 4 out of 6 from the focus group members agreed that the typography was legible enough for them and the used fonts is simple and clear except 2 of them who found that the main titles in the top of the pages as it was a script font hard to read and also, they can't read the word wrote with this font as it should be. The call-to-action buttons were designed to be very simple and have a sufficient color contrast with the background which made them easily to be seen, as all the focus group members found them easy to recognized and usable enough to be interacted with.

Results: from the above analysis of the experiment the author obtained the following results:
The results obtained regarding the design strategy for websites: - The prior determination of the potential users by specifying the main persona and analyze each one depending on preferences, needs, expectations and pain points is a crucial step in user experience process as the first step in the design strategy for website designs.

Designing the site map with its levels of hierarchy depending on the two techniques of card sorting is an essential step in information architecture design for the website. The ideal sequence of doing the ideal information architecture to design the site map is doing the open card sorting as a first step to know exactly the main categories of the information and to know the shared beliefs of users about this category, then doing the closed card sorting to know specifically which item will be under which category depending on user preferences. Doing a low fidelity prototype for the website to see the pages and the link between them is a cheap, easy and effective way to test the usability. Usability testing is a crucial step after doing the low fidelity wireframes in order to see the issues of navigations and the usability issues in early stages of the design process so it can be fixed without wasting time, effort and money. Good usability of websites makes the design more intuitive which enhance the online purchasing process in E-commerce websites

In accordance with our hypothesis (H1) we found that following the proposed Design Strategy steps will enhance and improve the usability of the E-Commerce websites.

The results obtained regarding the visual design considerations: Design the style tile at the early stages of the user interface design process is a crucial step to achieve visual consistency and enhance usability. Considering the color choice to be related to the brand will Enhance the brand visual identity. the ideal strategy to choose colors is depending on choosing one dominant color for the primary information like titles and call to action buttons and one accent color fort the secondary information like sub titles and hovering states and white background for E-commerce websites, this will enhance the usability of the website. Typography in websites should be legible and simple sans serif fonts will be more legible also the language used in the website should be clear and specified in order to enhance the interactivity and usability. Call to action buttons must be clear in the pages and have a sufficient color contrast to make it clearer and more intuitive. In accordance with our hypothesis (H2) we found that considering the appropriate design principles while designing style tile will achieve visual consistency and improve the usability in E-commerce websites.

Conclusion: In this paper the author examined the impact of applying the proposed design strategy with the mentioned steps to increase the usability of the websites ,the user experience design process is the first step including determining the persona needs , expectations and pain points and doing the information architecture by executing the open and closed card sorting techniques to make the most logical arrangement to the information in the websites then designing the sitemap and wireframes and doing the usability testing at this stage as a final stage in the UX design process to make sure that the navigation system is usable , Furthermore, examining the implementation of style tile including how to choose the appropriate colors , fonts and call to action buttons in achieving the visual consistency which enhancing the usability of the websites .

The results revealed that the hypotheses H1. Following the proposed Design Strategy steps will decrease the usability issues in websites, H2. Designing a style tile to achieve visual consistency will improve the usability in websites are not rejected this study aimed to put a specified steps for other designers to be followed in order to avoid common usability issues especially in E- Commerce websites in addition to put a visual strategy to design the style tiles to achieve visual consistency in the websites to enhance usability.

Keywords :

Design Strategy, User Experience design, User Interface Design, Usability

References :

1- Louis Rosenfeld, P. M. (2015). nformation Architecture for the World Wide Web: Designing Large-Scale Web Sites. California , USA: (4th Edition). O'Reilly Media.

2- Andrea Resmini, L. R. (2011). Pervasive Information Architecture: Designing Cross-Channel User Experiences. USA: Morgan Kaufmann.

3- Krug, S. (2014). Don'T Make Me Think, Revisited, A Common Sense Approach To Web Usability. Chestnut Hill, Massachusetts: Steve Krug.

4- Norman, D. (2013). The Design Of Everyday Things. New Yourk , USA: Basic Books.

5- Yvonne Rogers, H. S. (2023). Interaction Design: Beyond Human-Computer Interaction. USA: Wiley.

6- Jenifer Tidwell, C. B. (2020). Designing Interfaces: Patterns for Effective Interaction Design. Canada : O'Reilly Media.

7- Krug, S. (2010). Rocket Surgery Made Easy: The Do-It-Yourself Guide to Finding and Fixing Usability Problems. USA: New Riders.

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