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DESIGN FEATURES OF A MODERN SCIENTIFIC LABORATORY WEBSITE: UX/UI, ADAPTABILITY AND ACCESSIBILITY

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The study examines the role of a scientific laboratory website as a tool for science popularization and communication with both the scientific community and the broader society. The key aspects of effective website design are identified. The significance of logical structure, navigation, typography, and visual design in ensuring user-friendly interaction is analyzed. The role of a laboratory website in attracting new partners, disseminating scientific knowledge, and fostering international collaboration is highlighted. It is noted that high-quality web design contributes to the popularization of science among a wide audience.

Key words: UX/UI design, adaptability, accessibility (WCAG), scientific communication, science popularization.

INTRODUCTION

A scientific laboratory is a space for generating innovative ideas, conducting research, and making discoveries that can significantly advance scientific progress. However, the impact of this work largely depends on its accessibility to both the scientific community and the broader society. In this context, a laboratory website functions as an information hub that facilitates knowledge dissemination, promotes scientific achievements, and engages a wider audience.

A modern laboratory website is not just an information repository but also a platform for scientific communication. It offers access to publications, video materials, presentations, and interactive formats such as webinars and blogs. This fosters knowledge exchange, attracts partners, supports international collaboration, and helps secure funding for future research.

Given the importance of user experience, a key aspect of website development is its structure and usability. It is essential to apply UX/UI design principles, ensure adaptability across devices, and meet accessibility standards (WCAG). A well-designed laboratory website should act as a bridge between science and society, improving access and raising awareness of current scientific advancements..

PURPOSE

The aim of this study is to identify the key principles and features of scientific laboratory website design.

RESULTS AND DISCUSSION

The website of a scientific laboratory serves as a key tool for disseminating scientific information, providing access to publications, and promoting research.



However, its effectiveness largely depends on the quality of user interface implementation and the ease of navigation. Poor menu structure, insufficient text contrast, or slow page loading speeds can significantly hinder user interaction with the resource [1].

A key aspect of website development is applying UX (User Experience) and UI (User Interface) principles. UX ensures ease of use and intuitive interaction with the website, while UI encompasses the visual design of interface elements, including buttons, fonts, color schemes, and content layout. A well-organized web resource should include a clearly structured menu, easily readable content, and a logical page layout [2].

Additionally, a modern scientific website must be responsive, ensuring proper display across different devices (computers, tablets, smartphones). The absence of responsive design may require users to zoom in on text, scroll horizontally, or deal with missing interface elements, significantly reducing usability.

Equally important is ensuring website accessibility in compliance with international WCAG standards. This includes requirements such as high text-to-background contrast, the presence of alternative text for images (alt text), and the ability to navigate not only via a mouse but also through keyboard commands.

CONCLUSIONS

Thus, an effective scientific laboratory website must meet modern interface requirements, ensuring accessibility, structured organization, and high performance. This will facilitate the broader dissemination of scientific knowledge, attract new audiences, and integrate research into the global information space.

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ПІДДЯЧИЙ В.

ОСОБЛИВОСТІ ДИЗАЙНУ СУЧАСНОГО ВЕБСАЙТУ НАУКОВОЇ ЛАБОРАТОРІЇ: UX/UI, АДАПТИВНІСТЬ І ДОСТУПНІСТЬ

У роботі досліджено роль вебсайту наукової лабораторії як одного з інструментів популяризації науки та комунікації з науковою спільнотою й суспільством. Визначено основні аспекти ефективного дизайну вебсайту. Проаналізовано значення логічної структури, навігації, типографіки та візуального оформлення для забезпечення зручності взаємодії з користувачами. Окреслено роль вебсайту наукової лабораторії як засобу залучення нових партнерів, поширення наукових знань і сприяння міжнародній співпраці. Зазначено, що якісний вебдизайн сприяє популяризації науки для широкої аудиторії.

Ключові слова: UX/UI-дизайн; адаптивність; доступність (WCAG); наукова комунікація; популяризація науки.