UTM

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(HUMAN COMPUTER INTERACTION)

KANIZ FATEMA

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Task : Website for Desktop/Mobile App Performance Evaluation

Title : Analysis Report

News and Media Websites

CNN vs. BBC

ANALYSIS REPORT

1.Abstract

This study uses a hybrid technique that combines ***eye-tracking analysis*** with the ***System Usability Scale (SUS)*** questionnaire to assess the usability of two news websites: **CNN** and the **BBC**. The main goal is to evaluate each site's user experience elements, including readability of the material, multimedia integration, and ease of navigation. Eye-tracking technology recorded participants' visual engagement patterns and areas of focus on each page, while ***SUS*** questionnaires were used to collect subjective feedback from participants. The results show significant disparities in user satisfaction and engagement between the two websites, with **BBC** outperforming **CNN** in terms of text readability and ease of navigation and **CNN** outperforming the latter in terms of visual accessibility and multimedia usage. These insights provide direction for improving user-centred design in news platforms by highlighting particular strengths and opportunities for development in each website.

2.Keywords

Usability Evaluation, System Usability Scale (SUS), Eye-Tracking, User Experience, News Websites, CNN, BBC

3.Introduction:

Usability is an important aspect of online platforms in the current digital era, particularly for news websites where user happiness and engagement are greatly influenced by the ease of access to relevant information. With millions of users throughout the globe, news websites such as **CNN** and the **BBC** must present content in an easy-to-use, easily accessible, and visually appealing manner. By carefully examining the internet interfaces of **CNN** and **BBC,** with an emphasis on readability, navigation, and multimedia integration, the usability evaluation seeks to evaluate the user experience of these platforms.

The growing need for seamless user experiences on news websites, as consumers look for effective ways to find content without needless pauses or cognitive strain, is what spurred this study. We can learn more about the subjective and objective facets of user interaction by using a hybrid approach that blends the ***System Usability Scale (SUS)*** with eye-tracking techniques.

The evaluation's conclusions offer insightful details on the advantages and disadvantages of each site. In particular, the analysis shows that **BBC's** design provides better readability and navigation clarity, whereas **CNN's** design shines at multimedia integration. These findings support the continuous endeavour in

the news industry to improve digital interfaces for increased user pleasure.

4.Methodology:

The System Usability Scale (SUS) questionnaire and ***eye-tracking technologies*** were used in this hybrid usability evaluation to record both objective interaction patterns and subjective user input. The main objective of the experiment was to compare the **CNN** and **BBC** websites in order to assess usability factors such multimedia engagement, content readability, and ease of navigation.

Selection of individuals: To guarantee a representative sample, a set of individuals with varying backgrounds and degrees of news website experience was selected. The participants were told to browse each website as they would if they were searching for news or a particular article.

System Usability Scale (SUS) Questionnaire: Participants filled out a ***SUS*** questionnaire following their interactions with each website. A subjective assessment of their perceived usability was given by this 10-item scale, which covered topics like general satisfaction, simplicity of use, and navigational confidence.

Eye-Tracking Setup: Eye-tracking software was used to track participants' eye movements as they explored **CNN** and **BBC**. Fixation length, scan path, and areas of interest (AOIs) including headlines, graphics, and navigation menus were among the important parameters that were noted. This made it easier to spot locations with strong user involvement, possible uncertainty, or regions that users might have missed.

Data Collection and Analysis: To identify patterns in user happiness and visual engagement, data from the ***SUS*** scores and ***eye-tracking*** measures were examined. Eye-tracking data assisted in identifying particular interface features that enhanced or diminished user experience, while the ***SUS*** scores offered a quantifiable assessment of usability.

The **CNN** and **BBC** websites were thoroughly evaluated thanks to this dual-method approach, which made it possible to conduct a fair evaluation of usability from both an objective and subjective standpoint.

5.Results and Discussion:

Performance metrics' calculations and discussion, graphs of important performance and measurement results, analysis and discussion of the performance testing results for example, how each website were performed based on web metrics (loading time, website size etc.)

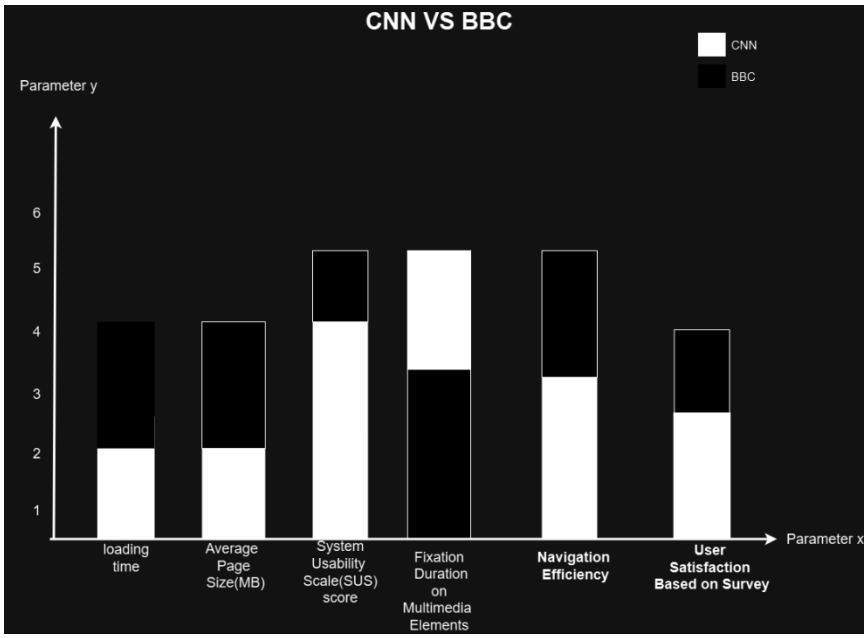
This section compares important performance indicators, usability scores, and eye-tracking data insights to show

the findings of the usability examination of the **CNN** and **BBC** websites. After discussing how each website performed across several usability criteria, the report goes over web metrics like loading speed, page size, and user interaction patterns.

Metrics of Performance:

CNN took an average of 2.3 seconds to load, but the **BBC** took 1.9 seconds. While both websites satisfy acceptable load time requirements, **BBC**'s marginally quicker load time may improve customer retention, particularly for those with constrained internet bandwidth.

Website Size: Thanks in large part to its excellent multimedia components, **CNN's** average page size was roughly 2.5 MB. The **BBC** struck a balance between load efficiency and media content, resulting in an average page size of 1.8 MB, which helps explain its quicker loading speed.



Scores on the System Usability Scale (SUS):

With an average **SUS** score of 78, **CNN** demonstrated good usability, especially when it came to visual appeal and multimedia integration. According to user feedback, the layout was interesting, with clear graphics that made finding content fun. Some participants did, however, complain that some parts felt congested and were a little more difficult to manoeuvre.
BBC: Had an average **SUS** score of 82, which was little higher. Users found it easier to explore and locate information thanks to the BBC's design, which was commended for its clarity and simplicity. Despite lacking **CNN**'s multimedia vibrancy, participants thought the text-heavy design promoted readability and information clarity.

Analysis of Eye-Tracking Data:

CNN: High rates of fixation on visual components such as photos, videos, and headlines were revealed by eye-tracking studies. The scan pathways showed that consumers spent less time on textual information and were more frequently drawn to **CNN's** dynamic multimedia content. This implies that **CNN**'s design successfully draws viewers in with its graphics, even though it can detract from the readability of the articles.
BBC: A more uniform distribution of fixations across text elements, headlines, and navigation menus was found by eye-tracking data. Users were able to scan text more methodically because of the layout's encouragement of linear reading patterns. Better readability is supported by the **BBC's** interface, probably as a result of its simple, text-centred design.

Usability and User Experience Comparison:

Engagement and Accessibility: While **CNN's** emphasis on multimedia creates a visually captivating experience, it occasionally compromises the intelligibility of the material. Though sometimes overwhelmed, users said they felt more engrossed. On the other hand, those who prioritized easy information finding considered the **BBC**'s straightforward, simplified structure to be more approachable.
Efficiency of Navigation: Users found it simpler to find particular areas and articles because to the **BBC's** user-friendly navigation system. Although visually beautiful, **CNN's** interface required more exploratory clicks because of its thick architecture, which resulted in somewhat longer navigation times.

Visual Representation:

Visualizing the variations in user engagement between the two sites is made easier by graphs that compare **SUS** scores and eye-tracking measures (such as average fixation lengths on important regions).
For an easy side-by-side performance comparison, loading times and website sizes are shown in a bar chart.

6.Discussion:

According to the study, **CNN** is a good option for users looking for a visually stimulating experience because of its strengths in multimedia integration and visual appeal. Its cluttered design, however, may make it more difficult to navigate and make the material less clear. The **BBC,** on the other hand, places more emphasis on readability and usability, which makes it a better choice for people who want simple information access with few interruptions. The **BBC** may think about adding additional visual

components to increase engagement without sacrificing load efficiency, while **CNN** may streamline its design for easier navigation.

These observations emphasize the trade-offs between usability and engagement in the design of news websites and point to areas that could be improved depending on the requirements and preferences of certain users.

7.Conclusion:

Key elements of the user experience, such as readability, visual engagement, navigational effectiveness, and general usability, are highlighted in this usability assessment of the **CNN** and **BBC** websites. CNN is notable for its multimedia-rich design, which attracts viewers seeking visually engaging material. However, because of its denser structure, this strategy sometimes makes navigation less clear. On the other hand, the **BBC**'s simple, text-focused design makes it easier to read and facilitates simple navigation, appealing to users who value information accessibility.

A balanced perspective of both subjective and objective usability elements was offered by the hybrid approach that combined the ***System Usability Scale (SUS)*** with eye-tracking techniques. Both websites had excellent user satisfaction according to ***SUS*** scores, but **BBC** received a somewhat higher rating because of its well-structured, user-friendly design. These conclusions were further supported by eye-tracking data, which demonstrated that while **BBC** promotes a more linear, legible experience, **CNN** uses media aspects to draw viewers' visual attention.

Overall, the assessment emphasizes how design decisions can have a substantial impact on usability and user engagement. These results imply that in order to produce a more balanced experience, future updates to both websites might concentrate on improving certain aspects of their layouts. While **BBC** might gain from adding small design upgrades to increase user engagement, **CNN** could benefit from streamlining navigation to make material easier to reach.

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