

Usability Engineering - Assignment 1

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Introduction

Sustainability practices in business today refer to minimizing the overall environmental impact of a business. It's becoming one of the core principles of businesses today since businesses are being able to cut down their operational cost, reduce dependency on natural resources which in turn allows projecting themselves unique among competitors. This report compares 2 such websites giving us more information on the topic of sustainability for IT business in terms of their usability.

Purpose Of Study

The purpose of this study is to compare and evaluate the overall usability of given 2 websites in terms of 5Es or Nielsen criteria. We are to evaluate which website proves to be more useful for providing information on sustainable development approaches for an IT business. It is also to understand different strategies, techniques, and methods in evaluating usability and merits and demerits each approach.

Compared Websites

1. <https://sustainabledevelopment.un.org/> (UN Website)
2. <https://www.imd.org/research-knowledge/sustainability/> (IMD Website)

Interview Questions List

1. Is it clear from this website what sustainability means?
2. Does the website give information on how sustainability might relate to an IT business in Australia? If so, where and what kind of information does it provide?
3. How would you rate the overall usability of this website for finding the relevant information?
4. What do you think of the overall layout of the website?
5. Did you notice whether there was any way to stay updated with the latest articles regarding sustainability in those websites?
6. Does the website anywhere tell you that attaining sustainability should go hand in hand with the business nowadays? (Information Seeking Task)

Test Description

[1] A face-to-face interview has been carried out in a comfortable, quiet, sufficiently lit office space at the start (9 AM) of the day. In other words, a moderated plus in-person usability testing method [2] has been adopted for this exercise. The interviewee (age 24) and interviewer (age 23) both come from a computer engineering background having sufficient knowledge about websites. The test has been carried out on a variety of devices including 15" touch laptop, standard 14" Laptop, a mobile phone, and a tablet etc.



Figure 1: participants positions Source:[2, Hotjar]

Both participants were sitting side by side so that interaction can be seen by both. The whole interview has been recorded for analysis purposes.

Interview Summary and Observations

Q. Is it clear from this website what sustainability means?

Neither of the websites could directly state the clear definition of sustainability right away. According to the participant, the UN Website provides a lot of context about the concept. It tells you more about the purpose and description of each goal which somewhat indirectly builds the concept of sustainability.

Why all businesses should embrace sustainability

Some top companies are leading the way

Figure 2: Article Title Source: Adapted from [3, Haanaes]

Simply put, sustainability is a business approach to creating long-term value by taking into consideration how a given organization operates in the ecological, social and economic environment. Sustainability is built on the assumption that developing such strategies foster company longevity.

Figure 3: Sustainability Definition Source: Adapted from [3, Haanaes]

On the other hand, on the IMD website, a user has to read a couple of articles having an average reading time of 7-8 mins each. IMD articles support statements with a relevant & sufficient number of examples which helps us better understand what sustainability could mean for a particular business. e.g “Pepsi and Coca-Cola have both developed ambitious agendas, such as increasing focus on water stewardship and setting targets on water replenishment.” [3] This states that making waste water potable is sustainability for a beverage manufacturer.

Q. Does the website give information on how sustainability might relate to an IT business in Australia? If so, where and what kind of information does it provide?

The interviewee was considering a mobile application company which also produces their own specialised hardware as a platform for running their applications. Well, from the interviewee’s perspective, neither of the websites gives direct guidelines on sustainability for IT business. UN website provide you impressive but very generic 17 goals giving you the foundation for ideas to work on. Take an e.g of SDG no. 7 - Affordable & Clean Energy. In the context of our IT business, Datacenter facilities

require an enormous amount of electricity for computing, cooling, and ventilation systems. Moreover, often back up is provided with diesel operated generators having efficiency in the range of 30%-60%.[4] Now, IT businesses can meet this goal by powering data centers with solar power and wind turbines and become sustainable. This way you can relate each goal with an IT business under consideration. On the other side, the IMD website is a bit theoretical. However, the examples in those articles make you think about what you can do to achieve something similar in a “Me-Too” way. E.g Haanaes [3] states that BMW and Toyota are being energy efficient so can the IT business. Hence both websites provide information that you can relate to an IT business.

Q. How would you rate the overall usability of this website for finding the relevant information?

The participant rated the IMD website as satisfactory with an overall score of 8/10 as opposed to 7/10 for the UN website in terms of 5E's. Please refer to the quantitative & qualitative data below.

Quantitative Data

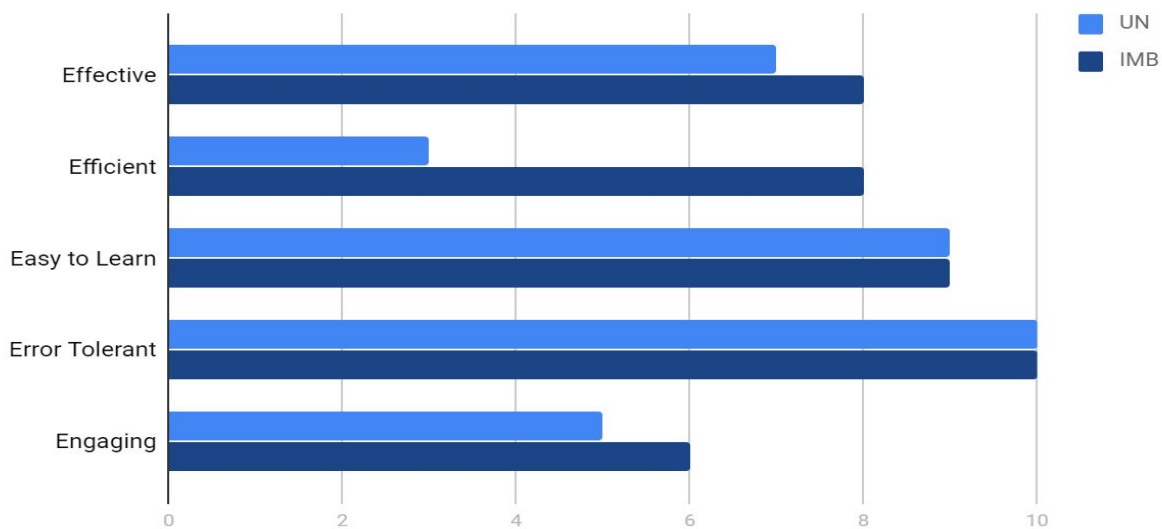


Figure 4: Quantitative data comparison of 2 websites

Each website received the exact same score in terms of easiness in learning (9 - 9 for UN and IMD respectively) and error tolerance (10 - 10 for UN and IMD respectively) and almost similar in terms of their effectiveness (7 - 8 for UN and IMD respectively). The learning curve for both websites is quite flat. Additionally, we didn't encounter any error in navigation, web page rendering and user account creation during the entire session. However, scores vary a lot in efficiency attribute. The persistent top navigation bar at the UN website covers too much reading space. Ideas have been described quite briefly but use jargon that made it difficult to understand for the participant. When this combines with small font sizes, the website doesn't seem much effective. On the other hand, the IMD website, some articles are short and the use of words is efficient enough for conveying an intended message. It also provides an estimated reading time for some articles. These factors unconsciously get the user to read an article. It has been observed that the user found each article to be unique in itself and engaged him to keep on reading. Statements are supported by relevant and enough real-world examples making understanding easy for everyone and so proves to be slightly more engaging than UN one

Q. What do you think of the overall layout and design choices of both the websites?

Home page of the UN website is quite informative and it tries to provide you with an abstract idea of

sustainability for a business, which is good. The participant also liked the use of infographics in between textual content, particularly the one with 17 SDGs listed all in one picture. However, the user didn't seem satisfied with the cluttered design of the article page. It tends to pack as much information as possible in a relatively small section of the page which made it more vulnerable to unintended user interactions [5]. E.g lack of white space between div of actual articles and cards of related articles. These cards happen to be in the scrolling area of a touch screen and often get clicked unintentionally. On the other side, the participant liked the use of bigger font sizes and ample white space on the IMD website. When compared to the UN website, White space in the IMD web page provided room for visual breathing and increased comprehensibility of the content [5].

Q. Is there any provision for staying updated with the latest articles regarding sustainability in those websites?

IMD website offers a subscription to newsletters right away at the article-specific page and it is simple enough. On the other hand, It took a while finding a subscription option on the UN website. After being unsuccessful, the participant became a member of the website to find if it is located in the account section. The UN website doesn't offer a subscription. The overall user experience in this particular case wasn't satisfying as locating the user account creation option was a task in itself because of the use of small icons instead of words. Later the participant noticed that the UN website does offer a Latest News section on the home page featuring the latest updates and articles in the area of sustainability.

Q. Does either of the websites anywhere tell you that attaining sustainability should go hand in hand with the business nowadays?

Both websites try to emphasize the importance of sustainability in businesses today in a quite clear and sometimes even alarming language. A film on the UN website under heading "Global sustainable development report 2019" narrates that [6] we have made significant progress so far but still we need to achieve a lot more. Business today doesn't only need to focus on reducing their negative impact on the environment and social life but also on putting efforts toward creating positive effects by showing awareness and active contributions to achieve sustainable development goals. We have to make sure that our strive for capitalism & economic growth shouldn't mine our own life support [6] "The future is now! Global Sustainable Development Report 2019".

Recommendations

A) For UN Website :



Figure 5 : 17 SDGs Infographics Source: Adapted from [7]

1. UN Website uses acronyms which seem to be very domain-specific which the general public doesn't seem familiar with. A tooltip can be provided that would pop the full form or even a small description when hovered over the word for better understanding.
2. The top navigation bar can be made non-persistent. This would increase the reading space.
3. Bigger font size would make reading much simpler and make content stand out.
4. Instead of having SDGs in circular animated fashion, a flat picture that is placed at the bottom homepage can be placed in the heading. It presents all the SDGs in a glance and increases readability.
5. Content can be rewritten using simple language
6. The use of white space in a balanced amount and appropriate line spacing will increase content legibility [5].

For IMD Website :

1. Relevant images can be put up against the article. E.g Glass leaf doesn't seem the right choice of media for that article.
2. For lengthy articles, the article's abstracts can be provided to increase effectiveness.
3. Article related tags can be shown to the user. This will inform the user whether information he is looking for is present in the article.



Figure 6 - Irrelevant Image - Source [8]

Limitations & Future Recommendations

Only one person has been interviewed so the score obtained may vary depending on user age, website navigation skills, relevant experience, and domain knowledge. Moreover, the mentioned observations aren't the first impressions of the participant since he had already spent sufficient time in familiarizing himself with the website before the interview. Having interview questions known beforehand limited the exploration capabilities of the participant.

For future studies, the sample size can be increased. More people from different work backgrounds & age groups can be interviewed. e.g A person having a degree in sustainability development might find finding relevant information easy as compared to an individual from an artistic background. Instead of recording observations, in the end, a series of observations can be recorded. This will help us better understand user reactions to information architecture at each iteration.

Conclusion

There are 17 areas such as clean energy, life on land, life underwater, etc. where businesses need to attain sustainability and the UN website provides SDG for each identified area. The best part about SDGs is that it is applied to every business out there including IT businesses. Although it doesn't provide direct guidelines, it definitely pushes users in the right direction which is fair enough. On the other hand, the IMD website talks about the latest trends in sustainable development. It does provide you a fair amount of context with a few examples to get started with the thinking process. However, this alone isn't enough as

sustainability can't be selective but has to be attained as a whole meaning the UN website is more usable than IMD.

Reference List

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