Improve Usability of Tourism Websites Based on Agile Strategies

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Abstract—**Usability is critically important in developing tourism websites because visitors expect tourism websites to be attractive, interactive and informative. The main aim of this paper is to analyze and examine the content of tourism websites. A case study has been performed on a tourism website to understand the usability gaps of tourism websites development process for better website usability and user satisfaction. The paper discusses factors that are success combinations of features that a tourism websites must have. Considering the success factors10 tourism websites were analyzed. The paper presented a report on the analyzed data and give suggestions for making tourism websites more efficient.**

Keywords-Usability; Agile Strategy; Content Analysis; Tourism Websites; Progressive Web Apps; Predictive Search

I. INTRODUCTION

The wide variety of existing information and the rapid development of information technology have made many web-based application products and services available for dally use. Information distribution can be done by improving knowledge access and transferring knowledge by using media such as website [2]. Websites are used daily for reading news, finding work vacancy, shopping, finding telephone information, ordering food, planning for a trip, selling products and even helping a company business processes. Among such website is tourism website. Interface development for tourism website must actively involve user from planning trough evaluation [3].

On the Web, usability is a necessary condition for survival. If a website is difficult to use, people leave [6]. According to Hayat Dino [7] usability must be tightly integrated in the software development process and makes its objective to examine how usability can

be integrated more tightly into a specific software development process model that is being applied by the majority of software development companies. The lack of usability may lead the end-user to need further assistant and having bad perception about the application or the website in essence that the end-user becomes less satisfied to use the application.

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An agile organization is defined as one that: adapts its organizational culture to market change, learns about market changes rapidly, takes advantage of these market changes and customizes its products to individual preferences (Desouza, 2007). An agile organization has the ability to take advantage of its opportunities and deploys its tangible and intangible assets in quick time cycles with the lowest possible cost and effort.

For Salah, Paige and Cairns [36], Agile and usability Integration gained increased interest due to these reasons:

• The reported advantages of Usability on the developed software as it enables developers to understand the needs of the potential users of their software, and how their goals and activities can be best supported by the software thus leading to improved usability and user satisfaction.

• The Agile community hardly discusses user needs and user interface design. More-over, none of the major Agile processes explicitly include guidance for how to develop usable software.

A.Nilawati,D.R.A.Pratama et al. [3] conducted analysis on Indonesia official tourism website using criteria specified for usability testing such as effectiveness, efficiency, consistency and interface design. Usability testing measures related to the human computer interaction used including ease of use, easy to learn, errors and syntax. As a conclusion the researchers suggested that a web-page design must be user oriented and the importance of identifying what kind of user that will visit the website. Even if the researchers evaluated the website based on evaluation criteria and identify usability gaps, they didn't address the website development methodology used with respect to website usability.

This paper performs a case a study on a tourism website to understand the usability gaps of tourism websites development process for better website usability and user satisfaction. Section two presents methods used to analyze tourism website Section 3 discuss success factors that a tourism website used have. Section 4 gives suggestions for the coming researchers Section 5 reports the outcome.

Present paper discusses several issues and challenges related to web usability. Analysis of various web usability factors is also presented. Rest of paper is organized as: Section 2 presents web usability and its significance. Section 3 discusses numerous issues and challenges related to web usability. In section 4, the proposed solution about good and usable web design is presented. Section 5 describes the conclusion of the paper.

II. METHODOLOGY

A case study will be performed on a tourism website to understand the usability gaps of tourism websites development process for better website usability and user satisfaction.

In order to have a thorough view of the usability of current city tourism websites, this study examines 10 sample city tourism websites. These 10 tourism websites were selected from https://blog.feedspot.com/africa_travel_blogs

In order to examine the content of the website I used content analysis methodology.

As Amy Luo definition

Content analysis *is "a research method used to identify patterns in recorded communication. To conduct content analysis, you systematically collect data from a set of texts, which can be written, oral, or visual, Books, newspapers and magazines, Speeches and interviews, Web content and social media posts and Photographs and films*

Hence, content analysis can be an effective tool to examine the content and functions of city tourism websites. The homepage of each of the 10 websites was thoroughly examined and the data were recorded in terms of functions provided, services offered and content presented. The results were grouped in several ways: by nations, by attributes, etc.

A. *Selected tourism websites*
1) Getaway Travel Magazine (GTM)
2) Jumia Travel Blog(JTB)
3) Cape Town Tourism(CTT)
4) In Africa and Beyond(IAaB)
5) Iconic Africa(IA)
6) Jumia Travel(JT)
7) Make my Trip(MmT)
8) Wego(W)
9) Africa's Jewel(AJ)
10) Nomadic Holidays and Safaris(NHS)

III. FEATURES OF TOURISM WEBSITES

These days, travelers use online travel portal to meet all their travel needs. People want to plan their vacations before they go, and they can't do that if your site isn't user-friendly

First impressions are formed quickly which also applies to travel websites now more than ever. Time spent by new users on the website is limited which means you have less time to get their attention and keep them in your website. [25] For travel website features, images and a standard booking system won't suffice. Over the years the web has changed drastically and something engaging and exciting is required to strike a chord with customers.

With this situation, the following factors are some of the winning combinations of features that a travel websites must have.

➢ Social sharing buttons

➢ Sticky menu & back to top button

➢ Augmented Reality (AR) and Virtual Reality(VR)

➢ Progressive Web Apps (PWAs)

➢ Images

➢ Predictive Search

➢ Pricing

➢ Easy Booking System

IV. CASE STUDY OF CITY TOURISM WEBSITES

Considering the above tourism website success

factors the 10 tourism websites were analyzed.

A. Social Sharing Buttons

The key to getting someone to do something is to make it easy for them. Adding social sharing buttons means that visitors can share the site to their own social media pages with one click. [25]

➢ It incorporates the number of times content is liked, shared, viewed, etc. So the more people you have sharing, the better you look to Google and the higher you are in the search results.

➢ Friend groups and families tend to travel together or to similar places. When the time comes to book a vacation, people are going to check what their friends recommend.
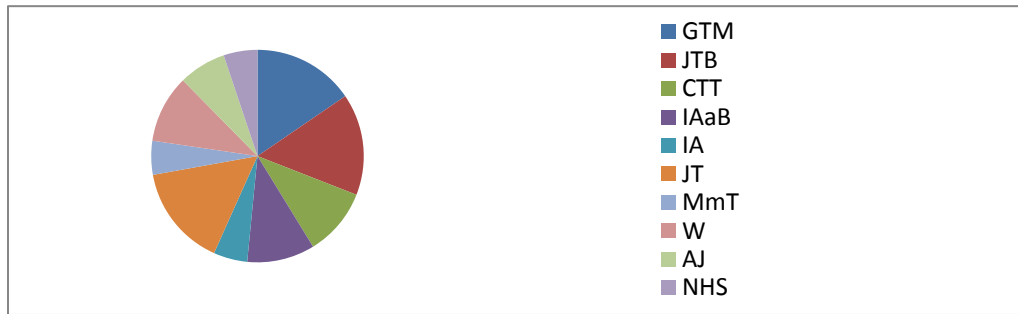

Figure 1.   Persentage of website having social sharing butttons

B. Sticky menu & back to top button

With a sticky menu or back to top button, your tourism website visitors will be able to quickly get to where visitors want to be.

TABLE I.   PERSENTAGE OF WEBSITE SHOWING STICKY MENU AND BACK TO TOP BUTTON

GTM	JTB	CTT	IAaB	IA	JT	MmT	W	AJ	NHS
90%	85%	75%	80%	65%	90%	80%	90%	80%	80%

C. Augmented Reality (AR) and Virtual Reality(VR)

AR provides a virtual tour with a 3D view of reviews for nearby location, Wi-Fi hotspots, real-time weather forecast and more. It can show extra information like destination information, eating joints and more. [26] It allows hotels and other businesses in this field to enhance the physical environments like local sights and hotel rooms so that customers will be encouraged to visit the place.

Virtual gives guided tours of any place in the world. This will especially help travelers explore small and less-known places. By giving a 360-degree view of the different locations, travel companies and agents can let customers explore the ground before booking and increase the level of trust simultaneously. [26]
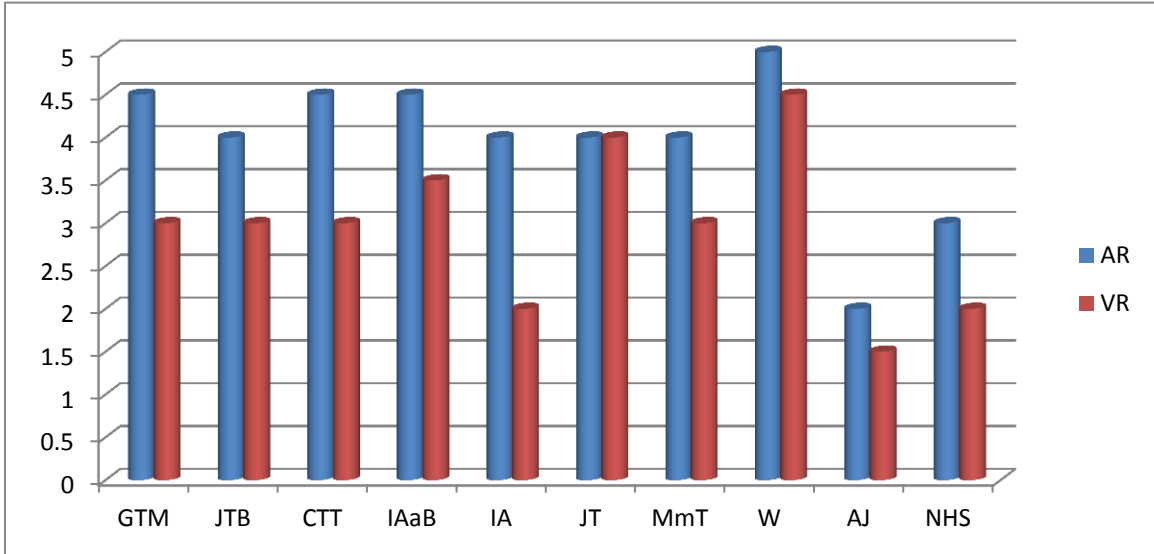
Figure 2.   Persentage of website showing Agumented reality and Vertual reality

D. Progressive Web Apps (PWAs)

Progressive web apps are modern web pages that also act as mobile apps. These apps have the usefulness of a native app but, when accessed through a browser, it does not require any downloading of apps which is a huge plus on conversion and usage ratio. If a user books a hotel through PWA, the user can access the information via the browser without internet connectivity too. Additionally, the PWA web page can be saved on the user's home screen and used as a mobile app. [26]
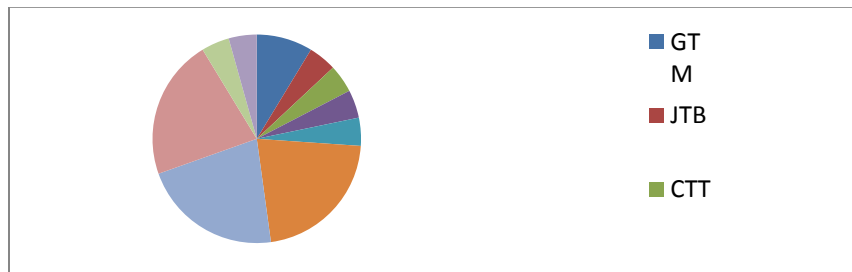

Figure 3.   Persentage of website having Progresive web Apps

E. Images

We live in a visual world and images are the most powerful way to inspire and transmit messages. They make a strong statement and will have a bigger impact on your website. Also, people interact more in social networking sites that has plenty of images. So it's safe to say that users will stay longer and interact more in a website that has lovely images.
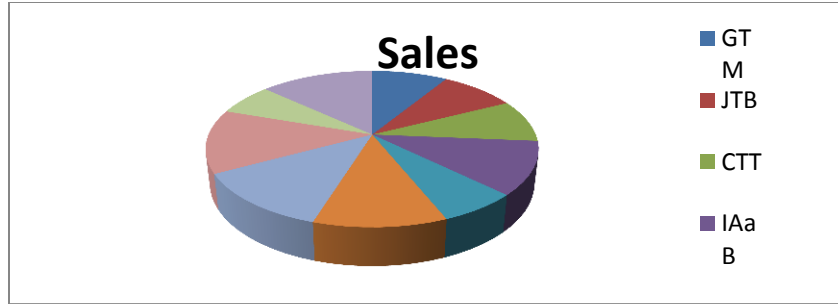
Figure 4.   Persentage of website showing image

F. Predictive Search

Predictive search is nothing but a drop-down list that pops up immediately while typing, so that you don't have to hit 'search' to find out common queries.

This is an excellent way to avoid displaying a large list of results, finding results quickly and to display questions the user hasn't thought of. It saves on typing if the user is using a device which does not have a physical keyboard like a tablet. [26]

TABLE II.   PERSENTAGE OF WEBSITE HAVING PREDICTIVE SEARCH

GTM	JTB	CTT	IAaB	IA	JT	MmT	W	AJ	NHS
80%	75%	80%	85%	95%	80%	75%	90%	80%	75%

G. Pricing

If the pricing is not clear and has hidden charges and taxes, there is a high chance of the user spending their money elsewhere. So, if you want to increase your profits, it is essential to know the importance of clear pricing. A pricing table must be simple and clear so that users' can choose the appropriate package. [26]

TABLE III.   PERSENTAGE OF WEBSITE SHOWING PRICE

GTM	JTB	CTT	IAaB	IA	JT	MmT	W	AJ	NHS
80%	0	0	0	0	1	1	1	0	0

H. Easy Booking System

To provide real-time updates, make sure your website is linked to a property management system (PMS). It will make things easier as they have to provide information like destination, check-in and check-out dates, contact details, and other travel related data [26]
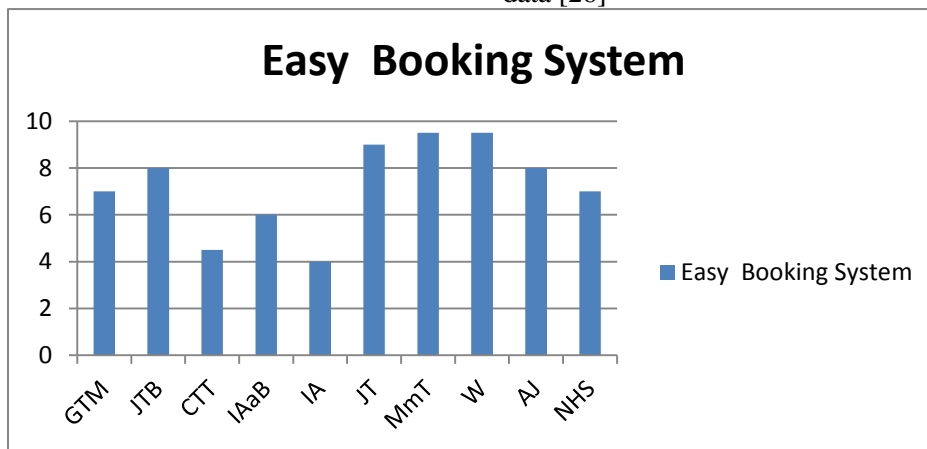

Figure 5.   Persentage of website having Easy booking system

V. SUGGESTIONS

I suggest the following solutions to improve the usability of city tourism websites and to bridge the gap among visitors.

➢ Adding Social sharing buttons

➢ Augmented Reality (AR) and Virtual Reality(VR)

➢ Presenting information for specific users would also help them easily find the information they need and build trust between the website and the users

➢ Broadening the way to engage the users and Progressive Web Apps (PWAs)

➢ Encouraging Image exhibition/gallery especially increasing interactivity Pricing

➢ Adding easy Booking System

VI. CONCLUSION

This research takes a close look with content analysis at representative tourism websites across http://www.umsl.edu/~wilmarthp/mrpc-web-resources/content-analysis.pdf. Usability here plays a crucial role as it is how easy is to use the site. It shows that usability challenges exist in various aspects in both content and functions. From this research I have learnt that we should create our site keeping in mind all the above factors given but check before updating it.

Many problems reflect a lack of user-centered design and interactivity in the city tourism website development. Also, I found that a site becomes irritating and user leaves the site in just 2 sec when the users demand or aspects are not fulfilled. So this, the most important is to make your first impression very calm and worth, so that the user can at least get some interest to know about the site. A well designed tourism website should consider the distinct navigating and information seeking behaviors of different users which is especially vital in the international tourism industry.

VII. LIMITATION AND FUTURE RESEARCH

I wish I had more time in doing this research. As we know one limitation lies in a pandemic disease so I'm expected to stay home with that it's a bit difficult to go through, understand and come up with an updated and new report. I also had a limited number of sample websites. Future research can be done in studying multiple tourism website

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