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Human-Computer Interactions: The Importance of Usability

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Abstract: ***The tremendous technological advancement that has endured through the last century to the present has led to more good than harm. Ranging from vast technological devices to information communication technology (ICT), which have become the new methods of communication, exchange of knowledge, collaboration, and innovation among users and organizations, life is getting more efficient. The technological devices, including mobile devices, systems application software, and websites, continue impacting lives positively. However, it is reckoned that there is a dearth of essential functionalities and utilities, particularly the Human-Computer Interaction (HCI) and usability. These are essential ingredients in any of these devices since they allow the computer users to take as little time as possible to complete their tasks while achieving high efficient performance.***
Key Terms: HCI, ICT, Usability, Website,

I. INTRODUCTION

To understand the two cogent terms, HCI and usability, the former generally denotes how humans, who are the users, interact with the computer (Issa & Isaias, 2014). While HCI might get construed as the study of people, computer technology, and how they influence each other, it is neither primarily the study of humans nor computers. Rather, it is the study of the bridge between the two. It includes observing the interactions between humans and computers, analyzing these interactions or the necessary steps involved, and ultimately includes the human consequences of interacting with the computers. For example, the consequences can ask whether the users can perform their tasks and enjoy operating the device?

It is evident, though, that behind these computers are humans who operate them. In the past, technology had not advanced much, and gadgets were expensive to acquire. Consequently, only a few technical people operated them. Today, computers are inexpensive and easy to acquire hence used by many, including non-technical persons from diverse backgrounds, knowledge, needs, and skills. Software and computer manufacturers have gained cognizance of the vitality of making these devices friendly to the users; this is referred to as usability. Also known as “user-friendly,” usability is the ease of use, saving users time and high-quality performance. How then is usability imperative?

II. IMPORTANCE OF USABILITY

A. Method

An only survey was employed in the study to assess the HCI aspects and importance of usability. The use of contemporary technologies such as the internet, computers, social media, and other communication platforms and devices is essential in modern society.

B. Research Questions

The participants (N=104) were asked if usability is an important aspect of the web development process. Further, they were asked about the consequence of poor usability in clients’ experience in terms of time consumption.

Users, groups of users, organizations, and companies make sky-high profits through enhanced marketing and customer engagement hence improved sales volume. On the other hand, some users, companies, and organizations have suffered huge losses and experienced reduced performance because of the disparity in modern technologies. The respondents were asked whether the adoption of usability principles in web development increases clients’ profit.

C. Findings

The internet, for instance, has become the most successful tool that promotes and enhances business through marketing and interaction with the users both locally and across the globe. Through the internet, people can interact, collaborate, communicate and engage each other. The internet platform has also enabled businesses to thrive since suppliers engage, collaborate and communicate with customers.

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Businesses relying on the internet can increase their sales, maximize profit, and reduce costs, hence gaining a competitive edge. As Meng (2010) asserts, the internet has provided E-marketing as a modern communication technical strategy that organizations and agencies use to trade the potential market into a real market.

Nevertheless, this is only tenable when suppliers have mastered the art of dealing with clients interactively at any hour of the day or night at the comfort of virtual space from any device. In this regard, usability comes into play when buyers and suppliers interact in two-way communication. By enabling quick access to information and capturing the target audience, it is easy to use the internet to one's advantage.

Today, many people prefer online businesses and transactions to traditional physical attendance to malls and the purchase of goods. Web developers and computer manufacturers are tasked with creating usable sites and devices that users from different backgrounds can operate with a lot of ease. While developing formal and informal websites, developers consider such stages as establishing the need, collecting information, designing and creating the website, implementing, maintaining, and piloting the website's usability (Issa & Isaias, 2014). If these stages get followed to the latter, users can hardly experience draggy and confusing websites.

Figure 1: Illustrating HCI in the Past and Now

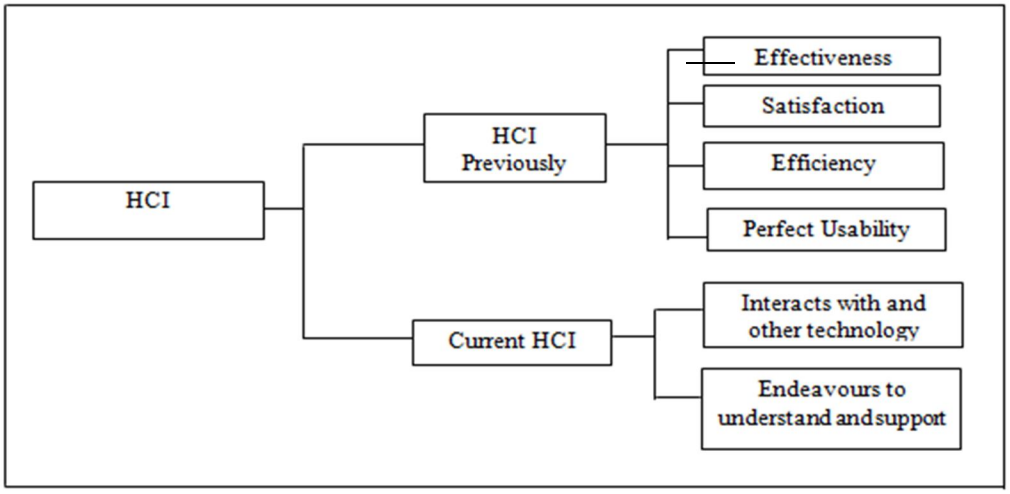

Figure 2: Chart Showing Aspects of Usability

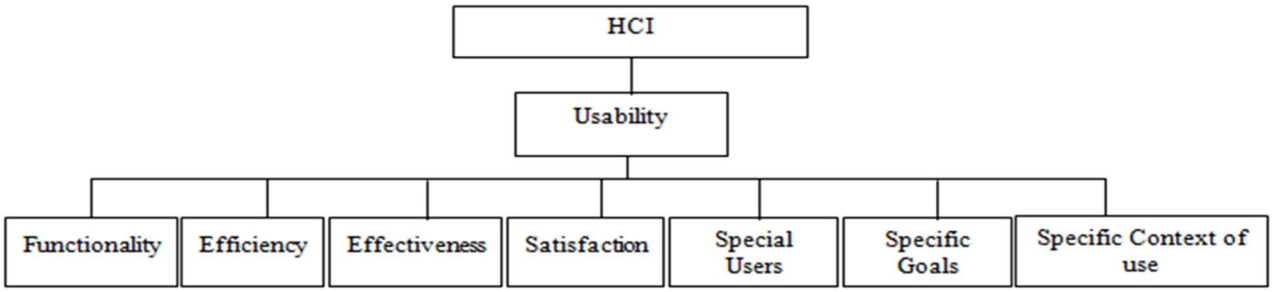

Table 1: Likert Scale for HCI and Usability

Questions	Strongly Agree (%)	Agree (%)	Neutral (%)	Strongly Disagree (%)	Disagree (%)	Responses
Is usability an essential aspect of the website development process?	52	38	10	0	0	104
Does poor usability make clients' experience hard since it consumes time to learn the concepts?	34	52	10	0	8	104
Can the adoption of usability principles in web development increase clients' profit?	28	64	6	2	2	104

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III. DISCUSSION

When asked if usability is an essential aspect of the website development process, of the 104 respondents, 52 strongly agreed, 32 agreed, 10 were neutral. None disagreed. It is observed that website development methodologies inadequately comply with the approved development stages, thus gives users bad online experiences. From the online survey, 104 people were asked if poor usability makes clients' experience hard since it consumes time to learn the concepts. 34 strongly agreed, 54 agreed, and 10 were neutral. However, 8 people disagreed. From the statistics, the majority of the respondents agreed that poor usability gives clients a hard time. Often, it leads to frustration and confusion when using websites with zero user-friendliness since users cannot navigate, interact, find information, and do their business using poorly developed websites or software applications.

How then can these problems be solved? The respondents were asked whether the adoption of usability principles in web development can increase clients' profit. 28 of 104 strongly agreed, 64 agreed, 6 were neutral, 2 strongly disagreed, and 2 disagreed.

IV. CONCLUSION

Conclusively, from the data, developers and users need to understand the four core principles of usability, user participation, real interaction, and Iteration (Issa & Isaias, 2014). These principles are vital tenets for the success of a website or software application. User participation is central to website development from the beginning to the terminal phase. The essence of usability is the website's or software application's functionality, effectiveness, efficiency, satisfaction, features for particular users within the website's goals and usage context. Primarily, failing to accord HCI and usability attention it begs for can lead to the success or failure of users and organizations. Matters on difficulties associated with computer use and user-machine friendliness most often lead to disadvantages.

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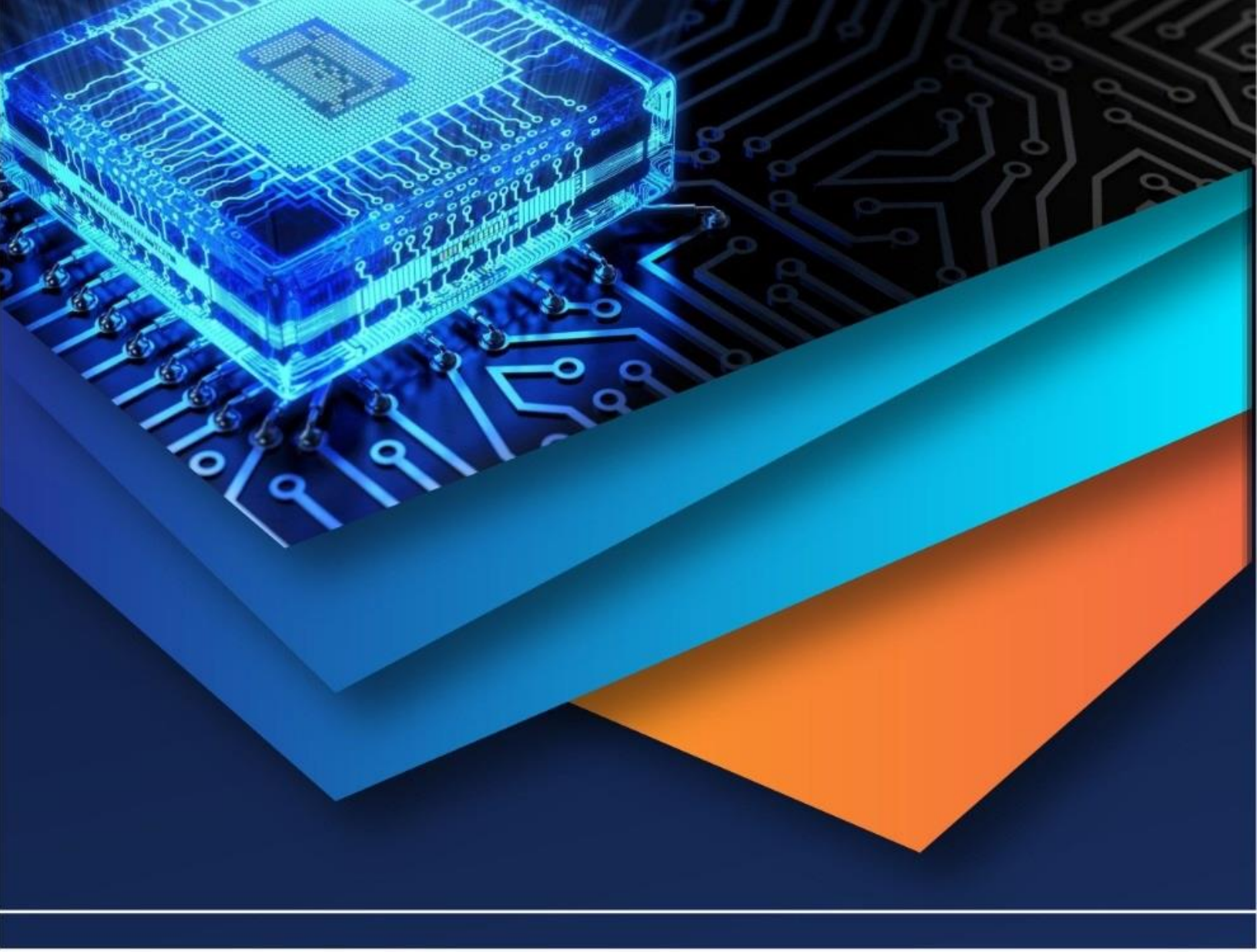

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