Promoting The Vision And Research Mandate Of Institutions Through Mobile Technology In The 21st Century: Case Study "NILEST Mobile-App"

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Abstract: Background: Technological advancement has changed the way information and awareness creation is handled in today's world. Developing an alternative system and a more convenient way becomes imperative for every organization. The aim of this project was to design a mobile app which could enhance the promotion of the vision and research mandate of the Institute. Method: The following applications were utilized in the design: Dreamweaver studio 8, HTML 5, Corel-Draw 15, Android cheat sheet for graphic and iOS converter. A sample of the developed mobile app was tested on both android and iOS mobile phones. Result: The result showed that the app is android compatible and user friendly. It has the ability to update her users with current information from the institute as well as local and international news. It gives easy navigation to the institute's social media pages online. It also show case various aspect of the institute ranging from academic policies, rules and regulations governing students activities and finally the mandate, vision and mission of the institute. Conclusion: This study demonstrated how a mobile application technology could help to propel the vision of an institute via mobile app in order to achieve her strategic set mandate and organizational goals.

Keywords: Mobile app, Communication technology, Leather Institute, NILEST, Android phone.

1. Introduction

The mobile communication technology has become the world's most common means of transmitting voice, data, and services. There is no technology in the world that has ever spread faster than the mobile communication [1], [2], [3]. Mobile application, generally referred to as "Mobile app" is a software designed to take advantage of mobile communication technology, enabling the collection and transmission of data for economic and social activities: whether for commercial, administrative, or entertainment purposes [4] These mobile apps have gained increased popularity in Nigeria, Africa and rest of the world as a result of the advances in mobile technologies and the large increase in the number of mobile users [5], [6]. Consequently, mobile app platforms which provide a new way for creating awareness and introduction of product and services have emerged. These platforms have been proven to be more effective than signposts, handbills, newspapers and television publicity. It was estimated as of 2010 that there were 5.25 billion cellular telephone subscriptions worldwide and that by the end of year 2015, the number of mobile phone connections would have exceeded the global population [1]. There is no doubt that this fact has been achieved. With mobile handsets being used by almost every persons across all countries and communities, the development of mobile apps would provide the most economic, practical, and accessible routes to information, markets, governance, and finance for millions of people who have been excluded from their use [7], [8],[9]. The app will certainly create more awareness about an institute to countless number of users. For instance, practically everyone in Nigeria uses leather and leather products in one way or the other, yet the "Nigerian Institute of Leather and Science Technology (NILEST)" established with the sole mandate to conduct research and development on leather technologies and leather goods production is hardly known in majority of the states of the federation. The institute was established since 1964 in Zaria- North West Nigeria, with the sole mandate to provide courses of instruction, training and research in the field of leather products technologies and conduct research and development on leather technologies and goods production. One would expect that after over 50 years of inception, the institute would have become a household name in Nigeria. Unfortunately, that is not the case. The Institute is hardly known in majority of the states of the federation. Having over 92% of Nigeria mobile users on android devices would certainly foster the actualization of the vision of the Institute. This would positively promote the vision of the institute in her strive to become a centre of excellence. It is expected that in no distance time the word "NILEST" would become a household name by virtue of NILEST-Mobile-App. There are three main categories of mobile-apps. These are: native mobile-app, web-based mobile-app, and hybrid mobile-app [10], [11]. Native applications run on a device's operating system and are required to be adapted for different devices. Web-based apps require a web browser on a mobile device. Hybrid apps are 'native-wrapped' web apps. In a recent research, it was reported that developers are mainly interested in building native apps, for the fact that they can utilize the device's native features (such as camera, sensors, accelerometer, geolocation) [12]. Given this dramatic change, the objective of this research was to design and developed a mobile-app for the Institute with the aim that it would

significantly contribute to the Institute's drive in striving to achieve her vision of becoming a centre of excellence.

2. Methodology

Materials: Android phone, computer system, dream weaver, Microsoft office for window 7.

Ethical Approval: The design and development of the mobile app was approved by the Research and Development Directorate of the Institute during the monthly seminar series presentation on 10th September, 2015.

3. Results and Discussion

The Table 1a shows the icon of the developed mobile app after installation on an android device. From the screen shot, it can be seen that installed NILEST Mobile app was synonymous with every other related android app on the system. The figure 1b shows the login screen when the app was launched. The login platform on the developed mobile-app is part of recommended security measure for android app [13].
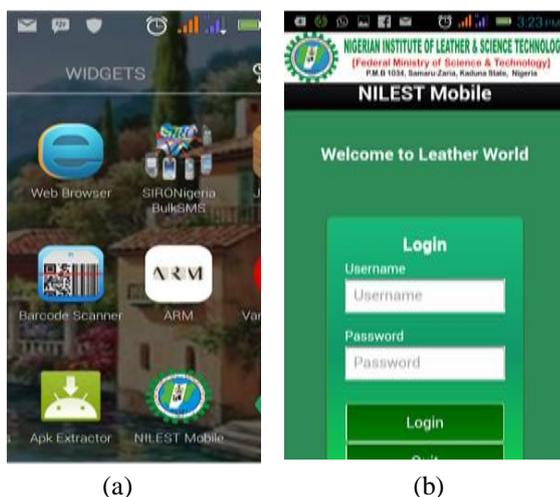

(a)   (b)

Figure 1: A Screen Shot Presentation of the (a): Icon of the NILEST-Mobile-App in an Android Phone Devise and (b): The Login Page of the NILEST-Mobile-App

Some of the basic screen-shots contained in the mobile-app are presented in the Figure 2. The Figure 2a contains the navigation link showcasing the historical background on the institute. The details about the administration procedures and students information notices like admission requirement, guidelines for students conduct and graduation requirements are contained via the page. These links would enable users get acquainted with the detail information from the institution.
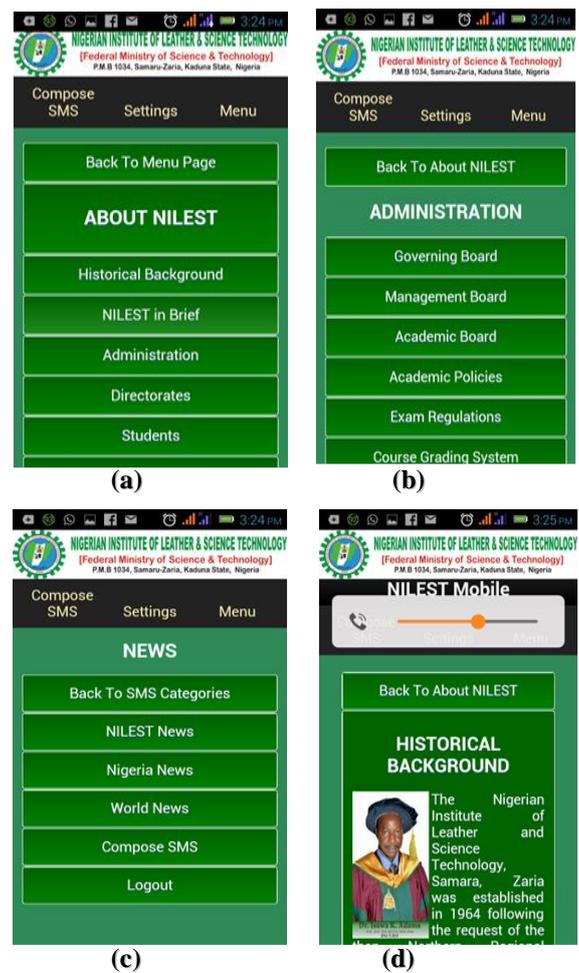

(a)   (b)

(c)   (d)

Figure 2: Screen Shot Presentation of some Basic Features of the NILEST Mobile App

Details about the members of the governing board, academic board, and the names of the different, directorate, department, divisions and units are also present. This provision is in line with previous investigator [14],[15], [16]. The presented version of the NILEST Mobile App also contains the following basic features: Ability to utilize the app in sending of SMS/Bulk-SMS with dynamic sender ID. Select individual recipient from the phone address book. The app is highly interactive with easy navigation, user friendly and downloadable via the internet from the institute website. The NILEST mobile-app was designed to enable peer-to-peer sharing of information, which is in accordance with those of previous investigator [17], [18, [19], [20].

4. Conclusion

The NILEST Mobile app as designed would in no doubt promote the institute in the dissemination of information. Considering the cost effectiveness in terms of maintenance, the mobile-app is extensively better than the traditional website as it does not require renter's fees annual renewal charges or domain renewal. It can be shared with ease via Bluetooth, flash share, xender app etc. The NILEST Mobile-app would be an instrument for reaching out to every user if utilized appropriately. It is therefore recommended that the policy makers and management of the institute to see that

the app is made freely available through online playstores.

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