



MAKING SENSE OF MOBILE APPLICATIONS' TERMS AND CONDITIONS: PERSPECTIVES OF USERS IN TARABA STATE

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ABSTRACT

The study examined awareness, knowledge and attitude of mobile App users in Taraba State toward Terms and Conditions. The study used descriptive survey design. The sample for this study is 384, this sample size was arrived at using the Krejcie and Morgan Sampling Table. Data was collected from undergraduate students of Taraba State University, Jalingo through online questionnaire. The data were analyzed and results revealed that participants are aware of mobile Apps' Terms and Conditions. However, the results indicate poor knowledge of T & C among the users; 15.9% understood that T & Cs provide useful information that guide user, while 12.8% know that T & Cs explain the engagement of an App with the user's device, 70.8% could not tell that T &Cs of mobile Apps serve as agreement between user and the developer. Also, the result indicated that most users have poor attitude to Apps T & Cs. it was found that 52.3% do not read T & Cs before installing an App and 81.6% only click the "I accept" bottom just to be allowed to download an App. Poor attitude of the users is linked to the length of T & Cs (94%), use of complex words (81%) and font size (83.1%). It was recommended that App providers should simplify Terms and conditions as well as reduce the length. Providers can adopt the use of audio Terms and conditions where the user can listen to the Terms before installation. Also, the researchers recommend that app providers should use bigger font and more visible font size.

Key Words: Making sense, mobile application, terms and conditions, perspectives

Introduction

The last two decades have witnessed a rise in the use of the internet globally. As of January 2021, there were 4.66 billion active internet users worldwide, this represents 59.5% of the global population of about 7 billion. While China was ranked as the country with most internet users globally with 854 million users, Nigeria is the leading country in Africa with more than 154 million users (World Internet Statistics. March, 31st, 2021). Similarly, internet usage in Africa has increased by about 12,795% between the years 2000 and 2021 and Nigeria is the leading country in Africa with more than 154 million users (World Internet Stat, 2021).

The rapid growth in internet use has led to numerous innovations in the era of new media such as the development of mobile devices like iPhones and Android smartphones which have rich communication capabilities above conventional mobile phones and computers. Statistics show an increasing penetration of iPhone and Android smartphones around nations of the world including Nigeria. (Hsiao, et al, 2017).

iPhone and Android smartphones present an opportunity for software developers to enrich the innovations with a variety of software applications (mobile applications) simply known as mobile “apps” to enhance functionality of the devices. A mobile app is a small, task-focused and executable program operating on a mobile device and can be installed on user’s device either by purchase or for free (Kelley et al., 2013). Over the last few years, Mobile app industry has experienced unprecedented growth. The two most prominent app markets are Google Play Store for Android operating system and Apple App Store for iPhone(Iqbal,2019).

However, in the process of installing mobile apps in any supported device, intending user is primarily required to agree or sign to certain legally binding terms and conditions (T & C) by means of clicking an identified bottom designed by the app developer. Terms and Conditions of mobile apps state what the user’s rights are and what options the user have to better control the use of personal data provided through the app.

Despite the significance T & C of mobile apps, previous researches (e.g Tsai, et al, 2011, Nissenbaum, 2011 etc) shows that most users rarely read the T & C of online service providers including mobile apps. They hastily sign or click the agreement bottom without second thought. It has been argued that T & Cs of internet service providers including mobile apps are frequently lengthy, having tiny fonts, used complex legalese thus, making reading boring and comprehension difficult (Pardes, 2018; Pew Research Center, 2014; Obar & Oeldorf-Hirsch, 2018). By not reading or not attaching relevance to T&Cs before downloading an app, consumers are disempowering themselves, an act that has negative serious implications.

When a user carelessly clicks the “Accepted” bottom in a quest to install an app, such a user has unknowingly consented to certain use of personal information that he or she will not approve in actual sense as such they become vulnerable to all kinds of privacy intrusion (Bettini & Riboni, 2015).

Bad perception and attitude towards the terms and conditions of mobile app for whatever reason, might impede effective communication between the user and the app developer; which is what gave birth to this study. Similarly, numerous studies on Mobile Apps T&Cs like Adum and Mozie (2020), Izzal, et al,(2020), Tang, Zhang et al (2021) among others, focused on awareness and knowledge of health mobile app, while the current study looks at the phenomenon of Terms and conditions of the use of mobile app.

Statement of the Problem

Mobile app developers provide Terms and Conditions (T & Cs) which are designed to guide the user(s) make informed decision before consenting to downloading an app.

Refusing to read and agree with the (T & C) expose the users to various risks. Also, poor perspective and attitude to mobile app’s T & Cs for any reason contributes to communication gap between the app developer and the user which might contribute to poor user experience and even make the user to uninstall an app and discourage others from downloading the same app. This phenomenon is known as asymmetric or incomplete information in the digital privacy.

Another issue is when a user mistakenly hits the “Accepted” box because they are anxious to install an app, they have unknowingly consented to the use of their personal information in ways that they may not actually have permitted, making them susceptible to all types of privacy intrusion.

All these are source of concern to app developers (Almuhimedi, 2015; Shih, 2015) that requires studies from different geographical areas to unravel the perspectives of app users toward T & Cs. It is against this backdrop that the current study is designed to examine the perspectives of mobile app users in Taraba State Nigeria toward the T & Cs necessary before an app is downloaded or installed.

Research Question

The study will provide answers to the following research questions:

- i. To what extent do mobile app users in Taraba State exposed to Terms and Conditions of mobile app?
- ii. To what extent do mobile app users in Taraba State comprehend app's Terms and Conditions?
- iii. Do mobile apps' Terms and Conditions influence users' decision to download apps among users in Taraba State.

Literature Review

Concept of Mobile Applications (Apps)

Mobile applications which is well-known as “mobile app” is defined as a program or software application designed to run on a mobile device such as smartphones and tablets rather than desktop or laptop computers. There are broadly three types of mobile apps; Native apps, Web apps and Hybrid app. Kelley, (2013).

Furthermore, Wigmore (2013) succinctly, defines mobile app as application software developed specifically for use on small, wireless computing devices, such as smartphones and tablets, rather than desktop or laptop computers. This definition goes to explained that mobile apps as the name implies are compactable only to smart mobile devices rather. However, it is important to note that there are apps that are downloadable to both laptops and desktop computers as well as Smart mobile devices, examples are Chrome and YouTube.

Mobile apps are facilitating consumers in every sphere of life (Taylor & Levin, 2014). The functions they perform are essential and specific, ranging from productivity, entertainment, and access to information. They are designed to be interactive and easy to use and also provide users with mobile contents such as text, audio, recordings, images, graphics and videos. Mobile apps are usually available through application distribution platforms, which began appearing in 2008 and are typically operated by the owner of the mobile operating system, such as the Apple App Store, Google Play, Windows Phone Store (Taylor & Levin, 2014). One of the issues with mobile app is the need for continuous support, update and design due to the fact that each operating system has a unique coding stream (Pastore, 2013).

Terms and Conditions

Terms and conditions (T & Cs) also known as terms of use and terms of service are basically the legal agreements between a service provider and the beneficiary of the service (Komblum, 1997). For the context of the current research T&Cs encompass any set of agreement commonly found in a digital environment (mobile app) which are required to be accepted before a user can advance or download an app (Elshout, 2016). Thus, Terms and Conditions (T&Cs) are the rules and the guidelines of acceptable behavior and other useful sections to which users must agree in order to use a given mobile app. Simply, T & Cs show the rights and responsibilities of mobile app user towards a company or app developer, as well as that of the developer toward the user. Therefore, they (T & Cs) served as legal contracts between app developer and the user. Once a user clicks a designated bottom often tagged “I accept”, the user has automatically entered into agreement with the app developer and the stated Terms and Conditions are binding on the user as long as the app remains installed on the user's device.

Mobile Apps' Terms and Conditions primarily spell out everything the user needs to know about what is required of them when using the app. Basically, such agreement according to Klein (2016), should include a clear delineation of the ownership rights of the mobile app operator with respect to the mobile app and its associated features.

Having a Terms and Conditions agreement is completely optional. No laws require so far to have one. However, it is highly recommended because they are incredibly valuable for both the user and the app

developer, because not only do they (T & Cs) provide the user with information to make sound decision regarding whether to adopt an app or not and how to behave on a given app about, but they also protect the developer or company against legal claims (Pegarella, 2021).

Review of Empirical Studies

Several studies on mobile apps exist. For instance, Adum and Mozie (2020) examined awareness, and utilization of mobile health applications among teaching and non-teaching staff of Nnamdi Azikiwe University, Awka, Anambra State, Nigeria. Adopting a survey research method, data was collected from a sampled of 360 participants. The study found that; there is low level of awareness of mobile health applications among staff of UNIZIK. However, the reviewed study focuses on awareness and knowledge of health mobile app, while the current study focused on the phenomenon of Terms and conditions of the use of mobile app.

In another study, Izzal, et al(2020) investigates the role of mobile app rating and cost in influencing the behavior of users. Copies of questionnaire collected through an online survey were 392. The analysis of the structural equation modelling determined a final model with four significant factors (functional, social, emotional, and conditional values). It confirmed that the usage is influenced by the apps rating and cost towards a certain degree. The above study though on mobile app, like that of Adum and Mozie, it has failed to examine the perception of mobile users to Terms and Conditions which is the focus of the current study.

Also, Tang, et al (2021) surveyed 453 users who authorized certain operations through mobile apps. The partial least squares (PLS) analysis method was used to validate the instrument and the proposed model. Results indicated that information relevance and transparency play a significant role in shaping app users' control-risk perceptions. Both studies focused on mobile app authorization which is part of Terms and Conditions, geographical differences remain a key distinction between the two studies.

Empirical results from Obar and Oeldorf-Hirsch (2020) who investigated the extent of skimming behavior highlighted that participants in an experiment spent a mere average of 51 seconds when reading a 15 – 17-minute T&Cs. These figures of predicted reading time are based on the average reading speed of a human of between 250 – 280 words per minute (Taylor, 1965).

Steinfeld (2016) in a study tagged "I Agree to the Terms and Conditions": (How) Do Users Read Privacy Policies Online?" Employed Eye tracking methodology to test if a default presentation of a policy or T & Cs encourages reading it, and how the document is being read by users. Results show that when a privacy policy or T & C is presented by default, participants tend to read it quite carefully, while when given the option to sign their agreement without reading the policy, most participants skip the policy altogether. Surprisingly, participants who actively choose to read the policy spend significantly less time and effort on reading it than participants in the default condition. Finally, default policy presentation was significantly related to understanding user rights and restrictions on the use of personal data. The above study has significant relationship with the current study on subject of investigation but differ in area of methodology.

Theoretical Framework

The study adopted Psychological Contract Theory to guide the research.

Psychological Contract Theory

The concept of "Psychological Contract" was first introduced by Chris Argyris in (1960). According to Mamonov et al (2015), Psychological Contract Theory (PCT) postulates that all exchange relationships involve implicit expectations that form the cornerstone of psychological contracts. Changes in behavior and attitude are triggered when these implicit expectations are judged to have been broken. Originally, this theory was developed to explain the employee performance and turnover intentions in the work place

because academics have found that the formal employment contract has little predictive value of the employee behavior.

Aside from the organizational contexts, PCT has been applied to examine exchange relationships of different settings such as virtual teams and online marketplaces Mamonov et al (2015). Previous research have shown that the idea of psychological contract affect how people adopt and use technology. More specifically, a breach of T& Cs and privacy policy caused by smartphone apps could be seen through the lens of Psychological Contract Theory to identify the factors that affect user privacy perceptions and to study the impact users’ perceptions on continuing information exchanges Mamonov et al (2015).

Methodology

The study used descriptive survey design. The descriptive survey design is more suitable in understanding the perception of a group of people (Tayo-Garbson et al. 2019)The population for this study is users of mobile apps in Taraba State. However, for the sake of effective data collection, the researcher used undergraduates of Taraba State University as the population frame. According to Admission Unit of Taraba State University, Jalingo, the total number of undergraduates as of 2021/2022 Academic year stands at 9,120. The sample for this study is 384, this sample size was arrived at using the Krejcie and Morgan Sampling Table and supported by Philip Meyer’s sampling. However, in line with the suggestion of Mugende and Mugende (2009) that the bigger the sample size, the more generalizable the result, the researchers added the sample to 400 having adopted the multi stage sampling technique. In the first stage, the researcher divided Taraba State University into Faculties. This led to ten (10) strata. In the second stage, the researchers randomly selected one department, this led to ten departments. The third stage had to do with the selection of study unit. In this regard, respondents were selected in each of the levels. This was done using accidental sampling. It is also important to note that the sample size was proportionally distributed across the selected departments.

Instrument used to collect the quantitative data in this study was questionnaire. The method of administration adopted was the face to face and self-administration strategies. The data collected were analyzed using descriptive statistical tools particularly simple percentages and frequency count. Kruger, et al (2005) revealed that descriptive statistics are the most efficient means of summarizing the characteristics of large sets of data. The analyzed data were used to provide answers to the research questions earlier posed.

Data Presentation and Analysis

In total, 400 copies of questionnaire were distributed online, and 384 valid responses were received. The completed copies of the questionnaire therefore yielded a response rate of 96% which is considered adequate for analysis.

Table 1: Respondents’ Personal Data

Variables	Frequency n=384	Percentage (100%)
Gender		
Male	201	52.3
Female	183	47.7
Age Bracket		
18-20 years	128	33.3
21-25 years	109	28.4
26-30 years	102	26.6
Above 31 years	45	11.7
Level		

100 Level	81	21.1
200 Level	96	25
300 Level	111	29
400 Level	72	18.6
500 Level	24	6.3
Duration of ownership of the Smartphone Device		
Less than 1 year	5	1.3
2-3 years	29	7.6
4-5 years	198	51.6
Above years	152	39.5
Extent of the use of Smartphone		
Very High	201	52.3
High	100	26
Average	76	19.8
Low	7	1.8
How often do you download mobile Apps		
Always	300	78.1
Once in a while	84	21.9
Not at all	-	-
Are you aware that every App has Terms and Conditions		
Yes	384	100
No	-	-

Sources: Survey, 2021

The Table above indicates that the distribution of female and male respondents is at 52.3% and 47.8%, respectively, which indicates that the majority of respondents are male. The respondents between 18-20 years old are 33.3%; those between ages 21-25 years old are 28.4%, also, those between ages 26-30 years old made 26.6% while those above 31 years old made 11.7%. The result implies that majority of the respondents are young persons between age 18-30 years. Many studies e.g(Prensky, 2005, Shadrach, 2019)etc earlier established that new media mobile Apps appeal more to the younger generation. Regarding the University level or class distribution of the respondents, the data indicate that those in 100 Level made 21.1%, 200 Level made 25% while 300 Level made 29%. Others include 400 Level with 18.6% and 500 Level 6.3%. This implies fair and proportional representation of the students in the entire University.

The table further revealed period or duration of the ownership of smartphone devices among the respondents. Those who have had smartphone devices less than a year are just 1.3%. Those that have ownership of the device for the last 2-3 years made 7.6% and those that have been using smartphone for the last 4-5 years made 51.6% while those above 6 years of ownership made 39.5%. This means that majority of the respondents owned and have been using smartphone devices for at least 4 years. This goes to say that they are familiar with such device and corresponding software or applications. Furthermore, the result on the Table indicates that majority (52.3%) of the respondents used smartphone to a very high extent, followed by 26% who indicate that their extent of use is high. However, 19.8% describe their extent of use of smartphone as average while 1.8% said low. This means that there is high usage of smartphone among the respondents. Furthermore, the result on the Table above revealed that majority (78.1%) of the respondents always download mobile Apps while 21.9% download once in a while. Also, all the respondents indicated that they are aware that mobile Apps have Terms and Conditions before installation.

By implication, the respondents who are between 18-20years are predominantly males who owned and have been using smartphone and they always download mobile Apps.

Table 2: Respondents Extent of Awareness to Mobile Apps’ Terms and Conditions

Variables	Always n=384	Occasionally n=384	Not at all n=384
How often do you notice apps’ Terms and Conditions?	176 (45.8%)	49 (12.8%)	159 (41.4%)
How often have you been attracted to mobile app Terms and Condition?	9(2.3%)	29(7.6%)	346(90.1%)
How willing are you toward reading mobile apps’ Terms and conditions?	11(2.9%)	109(28.4%)	264(68.6%)
How often do you read mobile app Terms and condition before clicking the “I accept”?	8(2.1%)	182(47.4%)	194(50.5%)

Sources: Survey, 2021

The Table above shows users’ awareness of Mobile Apps’ Terms and conditions (T & Cs). Majority (45.8%) always notice T & Cs and 12.8% notice it but occasionally but 41.4% indicated that they do not notice T & Cs. This implies that the respondents do notices mobile apps’ T&C.

The study also examines the extent users are attracted T & Cs. Only 2.3% said the T & Cs of mobile Apps always attract their attention, 7.6% said the attraction is occasionally while majority (90.1%) said the T & Cs do not attract their attention at all. This by implication means, mobile apps’ T&C do not attract the respondents’ attention at all,

Furthermore, 2.9% of the respondents said they are always willing to read Mobile Apps’ T & Cs, 28.4% indicated that they are sometimes (occasionally) willing to read T & Cs while most of the respondents 68.6% said they are not willing to read T & Cs of mobile Apps. By implication, most app users in Taraba state university are not willing to read T&C.

The study further enquired the extent the respondents read T & Cs of Mobile Apps before clicking the “I accept” leading to installation of the App. The result shows that 2.1% always read the T & Cs, 47.4% said they occasionally read it while 50.5% said they do not read T & Cs at all. The implication of this is that, there is poor readership of T & Cs of mobile Apps before installation among users.

Table 3: Respondents’ Knowledge of Mobile Apps’ Terms and Conditions

Variables	Yes n=384	No n=384	Can’t say n=384
Terms and Conditions of Mobile apps provide useful practical information to the user	61 (15.9%)	48(12.5%)	275(71.6%)
Mobile apps’ Terms and conditions guide the user’s behavior	29(7.6%)	62(16.1%)	293(76.3%)
Mobile apps’ Terms and conditions tell the user the degree the app will work on the user’s device?	49(12.8%)	18 (4.7%)	317(82.6%)
Mobile apps’ Terms and conditions tell which features of a device works with an app.	71(1.8%)	19(4.9%)	294(76.6%)
Mobile apps’ Terms and conditions is agreement between provider and the user	100(26%)	13(3.4%)	271(70.8%)

Sources: Survey, 2021

Table3 above, shows the respondent’s knowledge of Mobile Apps’ Terms and Conditions (T &Cs). The result indicates that 15.9% who understood that T & Cs of mobile Apps provide useful practical information to the user, 12.5% said No, while 71.6% did not understand. This implies that the majority did not know that T &Cs provides useful information to users. So, they are ignorant and as well vulnerable to be expose to any privacy issue.

Also, only 7.6% knew that T & Cs of mobile Apps guide the user’s behavior while using the App 16.1% said no while 76.3% did not know. In addition, only 12.8% know that Mobile apps’ Terms and conditions tell the user the degree an app works on a user’s device, 4.7% disagree while 82.6% did not know. This by implication shows that mobile app operators do not know that T&C guide the user or tells the user of the extent an app could function.

Similarly, only 1.8% knew that Mobile apps’ Terms and conditions tell which features of a device works with an app, 4.9% said No while 76.6% did not know. In addition, 26% knew that Mobile apps’ Terms and conditions is an agreement between provider and the user, 3.5% said no while 70.8% did not know. The overall result is that the users have poor knowledge of Mobile Apps’ Terms and Conditions and do not know that T&C is an agreement between the user and the developer.

Table 4: Respondents’ Attitude to Mobile Apps’ Terms and Conditions

Variables	Yes n=384	No n=384	Can’t say n=384
I read T &Cs before I install any App on my device	15 (3.9%)	201(52.3%)	168(43.8%)
I only install Apps that I understood their T & Cs	6(1.6%)	211(54.9%)	167(43.5%)
I ignore Mobile Apps that I am not comfortable with their T & Cs	13(3.4%)	102(26.6%)	269(70.1%)
I only click the “I accept” bottom of Mobile T & Cs just to be allowed to install an app	312(81.6%)	18(4.7%)	54(14.1%)
Mobile apps’ T&Cs is long to read	361(94%)	2(0.5%)	21(5.5%)
I don’t like Mobile Apps T & Cs because they are too complex to understand	311(81%)	3(0.8%)	70(18.2%)
I don’t give any attention to mobile App T &Cs because they are too tiny to read	319(83.1%)	11(2.7%)	54(14.1%)

Sources: Survey, 2021

The table above, describes the attitude of the respondents toward Mobile Apps’ Terms and Conditions. It revealed that only 3.9% read Mobile Apps’ T & Cs before installation, 52.3% did not while 43.8% could not say. Also, only 1.6% indicated that they install only Apps they understood their T & Cs, 54.9% did not and 43.5% could not comment. By implication, good number of mobile app users do not read do not read T&C at all before installing the app.

Furthermore, 81.6% indicated that they only click the “I accept” bottom of Mobile T & Cs just to be allowed to install an app and 4.7% said no and 14.1% could not comment. The implication is that the users majorly possess poor attitude to Mobile Apps T & Cs.

The study further interrogated certain factors that might likely influenced the attitude of the users. In this regard, 94% indicated that the T & Cs are too long to read, 81% said they are complex to read and 83.1% said they are too tiny to read.

Discussion of the findings

The study examined awareness, knowledge and attitude of mobile App users in Taraba State. Data was collected from undergraduate students of Taraba State University, Jalingo. The data were analyzed and result revealed that participants are aware of mobile Apps' Terms and Conditions. The findings concur with that of Steinfeld (2016) who earlier revealed that users of mobile apps and websites are aware of T & Cs but lack motivation to read it due to many factors.

However, the result indicates poor knowledge of T & C among the users; 15.9% understood that T & Cs provide useful information that guide user, 12.8% know that T & Cs explain the engagement of an App with the user's device, 70.8% could not tell that T &Cs of mobile Apps serve as agreement between user and the developer. The finding above relates to that of Fiesler and Bruckman (2014) who established that besides their length, understanding online apps T & Cs usually requires high comprehension skills which is often lacking among many users.

Also, the result indicated that most users have poor attitude to Apps T & C. it was found that 52.3% do not read T & Cs before installing an App and 81.6% only click the "I accept" bottom just to be allowed to download an App. Poor attitude of the users is linked to the length of T & Cs (94%), use of complex words (81%) and font size (83.1%). The findings agree to that of Plaut and Bartletts (2012) who found that over 80% of participants in their study reported not reading T & Cs at all with the majority of the remaining 20% (17%) describing their reading as merely "skimming".

Similarly, Nissenbaum and Tsai et al., (2011) earlier found that since agreeing to the terms and conditions of websites and mobile apps is usually a prerequisite for accessing a website or an app, most users sign such agreement almost automatically without considering reasons for installing an app or avoiding it. However, the findings contradict outcome of studies like that of (Pew, 2013 & Pew, 2015) which indicates that app users and websites visitors have avoided using certain mobile applications or have uninstalled applications due to concerns about the use of personal information.

As postulated by Psychological Contract Theory, implicit expectations are fundamental of every exchange relationship and the basis of psychological contracts. Therefore, the T&Cs spell out the exchange between Mobile App developers and the users. However, where the users do not understand or read the mobile Apps' T&C, they will not enjoy the exchange because they are ignorant of it. The contract will be affected and it will equally affect their psychology and how they relate with the data; at that point they cannot claim that the contract has been broken.

Conclusion and Recommendations

Based on the result of the current study, it can be concluded that most users of mobile Apps make uninformed decision toward installing mobile apps on their devices. They do not understand the agreement they are making by simply clicking "I accept" bottom, hence, expose themselves to risks. This phenomenon has an implication on the viability or growth of the app industry because users who felt uncomfortable with the dynamics or workings of an app on their device are likely to uninstall it as well as rate it poorly; this will further discourage others from using the app and this might lead to economic or business lose for the provider regardless of the potential of an app.

Implicatively, app providers need to create more innovative ways to encourage users to read their Terms and Conditions make inform decision before installing an app.

Based on the findings and conclusion of this study, the following are recommended:

- i. App providers need to make the T&C more attractive in a way that the users will be eager to read.
- ii. The length of Terms and conditions for mobile apps need to be shorten. Providers should summaries the terms and increase the font size in a manner that the users will be willing to read.

- iii. Mobile App providers should provide certain motivations which could be in form of service or other benefits to encourage reading the Apps' T&C.

What is the policy implication of your study?

This study has established poor readership of Mobile Apps' T&C. By implication, service providers and stake holders must work towards ensuring that mobile apps' T&C are developed in a manner that users will read. The users should not continue in ignorance.

References

- Adum, Allen N & Mozie C. (2020). Awareness and Utilization of Mobile Health Applications among Teaching and Non-teaching Staff of Nnamdi Azikwe University Awka, Anambra State. Vol 5
- Almuhimedi H. (2015). A Field Study on Mobile App Privacy Nudging. Proceeding of the 33rd annual conference on human factors in computing system 787-796. Doi:10.1145/2702123
- Bettini, C., & Riboni, D. (2015). Privacy protection in pervasive systems: State of the art and technical challenges, *Pervasive and Mobile Computing*, 17, 159-174.
- Elshout, M., Elsen, M., Leenheer, J., Loos, M., & Luzak, J. (2016). Study on consumers' attitudes towards Terms and Conditions (T&Cs). *Final report. European Commission*.
- FreePrivacyPolicy (15 November 2021). Privacy Policies versus Terms and Conditions. <https://www.freeprivacypolicy.com/blog/privacy-policy-vs-terms-conditions/#:~:text=A%20Privacy%20Policy%20explains%20to,both%20you%20and%20your%20users.>
- Huang, G. H., & Korfiatis, N. (2015). Trying Before Buying: The Moderating Role Of Online Reviews. In Trial Attitude Formation Toward Mobile Applications. *International Journal Of Electronic Commerce*, 19 (4), 77–111. doi:10.1080/10864415.2015.1029359.
- Iqbal, M. (2019). App Download And Usage Statistics". <https://www.businessofapps.com/data/app-statistics/>
- Izzal, A.Z, Sharifah, N. & Chekfoung, T. (2020). Mobile consumer behaviour on apps usage: The effects of perceived values, rating, and cost, *Journal of Marketing Communications*, <https://doi.org/10.1080/13527266.2020.1749108>
- Kelley, P. G., Cranor, L. F., & Sadeh, N. (2013, April). Privacy as part of the app decision-making process. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 3393-3402). ACM.
- Klein, M.T. (January 28 2016). Mobile App Terms and Conditions for End-Users, available at: <https://www.lexology.com/library/detail.aspx?g=56bb1407-cff7-4c73-a528-f65c9aae6b14>
- Kornblum S. (1997). The effect of stimulus-response mapping and irrelevant stimulus-response and stimulus-stimulus overlap in four-choice troop tasks with single carrier stimuli.

- Malik, A., Suresh, S., & Sharma, S. (2017). Factors influencing consumers' attitude towards adoption and continuous use of mobile applications: a conceptual model. *Procedia Computer Science*, 122, 106-113. doi:<https://doi.org/10.1016/j.procs.2017.11.348>
- Milne, G. R., & Culnan, M. J. (2004). Strategies for reducing online privacy risks: Why consumers read (or don't read) online privacy notices. *Journal of Interactive Marketing*, 18(3), 15–29. doi:10.1002/dir.20009
- Mugenda O. (2009). A Hybrid Algorithm for Dictating Web Based Applications Vulnerability. An Open Access Academic Publisher.
- Nissenbaum, H. (2011). A contextual approach to privacy online. *Daedalus*, 140(4), 32–48. doi:10.1162/DAED_a_00113
- Oeldorf-Hirsch, A., Schmierbach, M., Appelman, A., & Boyle, M. P. (2020). The Ineffectiveness of Fact-Checking Labels on News Memes and Articles. *Mass Communication & Society*, 23(5), 682–704. <https://doi.org/10.1080/15205436.2020.1733613>
- Pardes, A. (2018, April 18). Welcome to the Wikipedia for terms of service agreements. *Wired*. <https://www.wired.com/story/terms-of-service-didnt-read/>
- Pastore, S. (2013). Mobile platforms and apps cross-platforms development tools. *Journal of Engineering Research and Application*, 3(6), 521-531.
- Pew Research Center. (2016). *Smartphone ownership and internet usage continues to climb in emerging economies; But advanced economies still have higher rates of technology use*. http://www.pewglobal.org/files/2016/02/pew_research_center_global_technology_report_final_february_22_2016.pdf
- Plaut, V. C., & Bartlett, R. P. (2012). Blind consent? A social psychological investigation of non readership of click-through agreements. *Law and human behavior*, 36(4), 293. <https://doi.org/10.1037/h0093969>
- Prensky M, (2005). In Educational Games, Complexity Matters Mini-Games are Trivial-But “Complex” Games Are Not an Important Way for Teachers, Parents and Others to Look at Educational Computers and Video Technology.
- Presser, S., Couper, M. P., Lessler, J. T., Martin, E., Martin, J., Rothgeb, J. M., & Singer, E. (2004). Methods for testing and evaluating survey questions. *Public opinion quarterly*, 68(1), 109-130. <https://doi.org/10.1093/poq/nfh008>
- Pegarella, S. (21 December 2021). Sample Terms and Conditions Template, <https://www.termsfeed.com/blog/sample-terms-and-conditions-template/>
- Shadrach I. (2019). Risk Awareness and Perception of Undergraduates in Northeast
- Shih K. (2015). “Game Factor and Game-Based Learning Design Model”. *International Journal of Computer Games Technology*.

- Steinfeld, N. (2016). "I Agree to the Terms and Conditions": (How) Do Users Read Privacy Policies Online? An Eye-Tracking Experiment, available online: <https://doi.org/10.1016/j.chb.2015.09.038>
- Tang, A. K. Y. (2016). "Mobile App Monetization: App Business Models in the Digital Era," *International Journal of Innovation, Management and Technology*, 7(5), 2016.
- Tayo-Garbson, S. U, Njoku, F.C. & Etumnu, E.W. (2019). Owerri residents' perception of women in journalism. *SAU Journal of Management and Social Sciences*, 4(1/2), 261-270.
- Tsai, J. Y., Egelman, S., Cranor, L., & Acquisti, A. (2011). The effect of online privacy information on purchasing behavior: An experimental study, *Information Systems Research*, 22, 254–268.
- Taylor, D. G. & Levin, M. (2014). Predicting Mobile App Usage for Purchasing and Information-Sharing, *International Journal of Retail & Distribution Management*, 42, (8), 759–774.
- Welman C., Krugar F., & Mitchell B. (2005). *Research Methodology* (Third Edition). Cape town: Oxford University Press.
- Wigmore, I. (2013) mobile app. [http://whatis.techtarget.com/definition/mobile app](http://whatis.techtarget.com/definition/mobile_app)