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Adoption of New Technology and its Effect on the Behavior of the Youths in Edo state, Nigeria.

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Abstract: *Technology adoption has become a global phenomenon such that every sector of the economy scramble for identifications and presence in this technological advancements. The youths are among the identified active participants in this sector. Hence this has elicited the interest of several researchers in identifying the effect of these all important phenomenon amongst the youths and it is on this premise that this article examines the adoption of new technology and its effect on the behavior of the youths in Edo state, Nigeria. This article examines individuals' adoption processes by looking at what factors motivates these identified youths in the adoption of various technology that is currently being implemented. Rogers's innovation diffusion theory, the Concerns-Based Adoption Model, the Technology Acceptance Model, the United Theory of Acceptance and Use of Technology and the New Modified Technology Acceptance Model was used. 140 youths in Benin-City, Nigeria were sampled randomly using convenience sampling method by administration of a well-structured questionnaires and findings on the factors that motivates individual to adopt new technology indicates variability depending on the use for which the technology is put. Amongst reasons adduced by the respondents as to why they adopt new technology are the use of a device that has time advantage and stress free, technology with new generation of youths in focus order to reduce their loneliness, ease of communication amongst their peer group, social networking, quick problems solvers, to be relevance and belonging to the new revolution of technological advancement, so much time are also spent experimenting until they achieved proficient among others which a times distract their mind and loss of creativity. It is then recommended that technological innovations providers should ensure its products has features that will add value and improved upon the features of existing systems, the new technology should align with the constructs of technology acceptance models of ease of use and perceived usefulness by the youths, also youths are always eager to experiment new technology that attracted theirs attention hence it should carries good memories of new features on the new technology.*

Keywords: ***technology adoption, beha****vior of youths, technology acceptance model, use of theories.*

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I. Introduction

Adoption of new technologies has major strategic impacts among diverse groups within the economic development and user behavior of nations of the world over. Consequently, it is recognized that amajor player in this drive of technological development globally is a group of users of middle age bracket referred to as the youths who are always on daily basis and regularly experimenting on emergence of new technology that is evolving. This also in most cases leads to the behavior pattern of these groups of users as a result of these experimentations depending the type of technology in question including Information Technology as well as Telecommunications.

This study attempts to determine the adoption of new technology and its effect on the behavior of youths within the metropolis of Benin-City, Nigeria. The introduction of new technologies is more often than not either poorly planned or simply not planned at all. The argument most frequently advanced to explain this shortcoming is the natural tendency of adopters not planning for it.Information Technology has evolved and has become one of the major tool of technological advancement of many nations of the world. Different groups of the society like the youths scrambled for participation in this sector of technology and because of their youthful vigor forms the larger population of the use of this technology. The success of Information Technology (IT) adoption in developing countries like Nigeria is growing slowly unlike the developed economy (Kim, 2000). Since IT became commercial in theearly 1990s, it has diffused rapidly in developed countries but generally slowly in developing ones, the youths are taking the driver seats to drive this technological behavior.

For example the world has been estimated to have about 350 million internet users. Over 90% of them are in industrial countries of the world, although developing countries comprise about 85% of the world population (Berndt and Morrison, 1995). Furthermore, while Internet use is not limited to certain groups

ofindividualsin terms of ages and sexes in industrial countries, the internet users in developing countries like Nigeria are mostly young, male, urban individuals in the middle and upper income groups and particularly the youths, and because of the importance attached to these age brackets it is important to look critically into how the adoption of new technology which are basically IT driven affect the behavior of these youths.This has made this categories of individual developed fast creative in their behavioral attitude. Again looking at the role of an individual or even a country that lags behind in technology adoption catching up with the state-of-art already in use in developed economies which experienced regular rapid changes to technology advancement makes it difficult for a country like Nigeria to catch up with these changes. However, the study attempts to determine the effect of the adoption of new technology on the behavior of the younger population who drives these changes.

In Nigeria, networking is now crucial to scientific research and development efforts, many of which yield tangible economic benefits and the youths are critical at these benefits. The country's commercial/economic growth is enhanced by access to information and improved contact with support from purchasing personnel and customers as well. Access to GSM and satellite TV networks also improves the effectiveness of the development of communities, comprising representative of international agencies, staff of non-governmental organization and others working locally and abroad. Nigerian universities are focusing on curricula that might contribute more directly to economic growth and network connections, the youths have availed itself vigorously of these technological advancement which also impact on their behavior patterns, some of which are positive and some negative behavior. The youths are also highly interested in participating in technology that are seen to be user friendly and easy to use which also forms part of major reasons why they are involved in this sector. So much time is spent experimenting on various features of new technology which in most cases makes these groups of individual spend so much valuable times using these systems with some behavior pattern emerging.

II. Literature Review

2.1 The youth

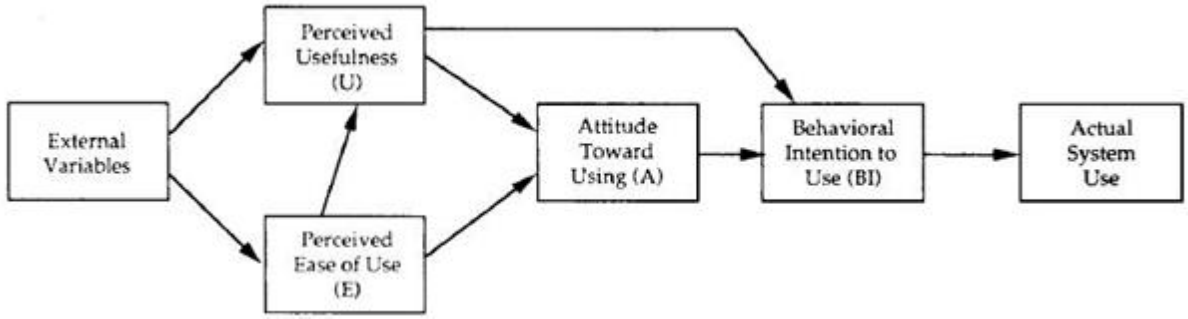
The youth has been variously defined by different authors and the one that catches the attention of these researchers is that Youth is generally perceived as the time of life between childhood and adulthood (Macmillan Dictionary, 1981). The age range that constitutes youth varies from one society to another because an individual's actual maturity may not correspond to their chronological age.

However, the United Nations define youths as persons between the ages of 15 and 24 (UNESCO, www.unesco.org – 21-5-13). The United Nations recognize the fact that young people are heterogeneous group in constant evolution and that the experience of being young varies across regions and within countries. There are some characteristics of youths that make them most vulnerable for development; the most important of which is their vigor and the spirit to achieve if an enabling environment is created for them. They are young, agile, and virile and are expected to be innovative. That can be seen from their constant involvement in technology revolution, which often culminate into their ability to dissipate so much energy in trying their hands on perceived new technology so as to see its end. But how much of these characteristicsin youths are being taken advantage of in the country today?

There are multitudes of challenges facing youths in the Nigerian society apart from their involvement in trying their hands in new technology, which is the main thrust of this study. The challenges are so enormous that it could make youths to be depressed and loose interest in activities going on around them and perhaps their constant stick to new technology reduces the chances of leading to depression. Population is on the increase by the day and this has in turn led to increase in the turnout of Nigerian graduates on a yearly basis. The job situation could thus, not cope with the graduates turned out from the universities. This possess a great problem for youths hence a lot of young people who should be involved in building the nation are found in criminal activities such as armed robbery, prostitution and fraud such as 419, the so called yahoo yahoo (Okeyonye, www.asorock.com). Some of these criminal activities were learned from continuous use of some of these technologies. These are some of the behavior acquired from the use of these new technology by the youths.Before one adopt a new technology, there is need answer inwardly the purpose for which the technology is being adopted, the technology one chooses should directly meet that purpose.

For instance quite often, one hears horror stories of organizations that were implementing new technology only to realize it was a waste of their time and money. Typically, the technology itself was not ineffective; it simply failed to address the actual needs of these groups of individual because of they did not properly determine for what use it is meant.

2.2.1 Technology Acceptance Model



Technology Acceptance Model (TAM), Davis (1989)

The Technology Acceptance Model is one of the most popular theories that is used widely to explain why individual including the youth which is the object of this research adopt technology.

So many studies have been conducted which has led to the changes in the originally proposed model. A new model called combined Technology Acceptance Model and The Theory of Planned Behavior (TAM-TPB) model which integrated the Technology acceptance model and theory of planned behavior was proposed by Taylor andTodd(1995). Venkatesh and Davis(2000) proposed a new version of TAM which they called TAM2 which added new variables to the existing model. Venkatesh et al.(2003) in a study published in MIS quarterly proposed the Unified Theory of Acceptance and Use of Technology(UTAUT) Model. Each of this theory tries to modify the original TAM by adding new variables to it and renamed it the modified theory of TAM as extended by other named researchers.

The original TAM has three main constructs of Perceived Ease of use, Perceived usefulness and Actual use, in order words that a technology is adopted when it is perceived as useful and easy to use. However, several researchers have since extensively worked, modified and re-modified this original TAM, for example, Agarwal and Prasad (1998a, 1998b) modified TAM by adding the construct of compatibility in theTechnology Acceptance Model. Moon and Kim(2001) has added a new variable playfulness factors tostudy acceptance of the World Wide Web the youths are therefore so engrossed with this when the technology is perceived to be in line with this construct of playfulness. Lim(2000) proposed to modify TAM by adding variables like experience, self-efficacy, perceived risk and social influence. Another study done by Agarwal andKarahanna added cognitive absorption, playfulness and self-efficacy to the TAM model. Chau(1996) ina study reviewed TAM by included two types of perceived usefulness: near-term and long-term. Vander,Heijden (2000) after analyzing the individual acceptance and usage of the website added two newconstructs to TAM: perceived entertainment value and perceived presentation attractiveness.This study aligned with Agarwal and Karahanna and Vander Heijden model but slightly modifying their constructs by adding another construct of perceived belongingness, as this all important construct featured almost in more than 90% of the respondents in this study as to why they adopt new technology, showing that belongingness also influences the technology adoption by youths in Benin-City.

A usable product is a better product.But even the most usable product isn't adequate if it doesn't do what it needs to.Products, software, websites, and apps need to be both usable and useful for people to "accept" them, both in their personal and professional lives.

That's the idea behind the influential Technology Acceptance Model (TAM).

Articles associated with TAM by Davis (1989) and Davis et al. (1989)was said to have received 424 journal citations in the Social Science Citation Index (SSCI) by the beginning of 2000 confirming the importance attached to technology acceptance by different groups particularly the youths. Extending the citation search further, was found to be 698 journal citation by 2003 and to-date with well over 3000 citations. TAM has been applied to different technologies (e.g. word processors, e-mail, WWW, GSS, Hospital Information Systems) under different situations (e.g., time and culture) with different control factors (e.g., gender, organizational type and size) and different subjects (e.g. undergraduate students, MBAs, and knowledge workers), leading its proponents to believe in its robustness. Currently, researchers in the IS field consider TAM one of the information systems fields' own theories, and still put much effort into the study of research using the theory.

Despite its great success, however, few previous systematic efforts trace its history or investigate and evaluate its findings, limitations, and future (e.g., Doll et al., 1998; Gefen and Straub, 2000; Legris et al., 2003). Evaluation is crucial for the IS community in that it helps researchers of IS Adoption understand TAM's past research findings, identify possible research topics, and conduct future studies.

2.2.2 Statement of the Problem

The prolific stream of research on information systems use as a result of technology acceptance takes a variety of theoretical perspectives. Of all the theories, the Technology Acceptance Model (TAM) is considered the most influential and commonly employed theory for describing an individual's acceptance of information systems. TAM, adapted from the Theory of Reasoned Action (Ajzen and Fishbein,1980) and originally proposed by Davis (1986), assumes that an individual's information systems acceptance is determined by two major variables.

The present study goes back to 1986, and traces the TAM research trajectory, and extensively

Investigates TAM's findings and its effect on the behavior of the youth. Despite the benefits attributable to the adoption of new technology especially by the youth, there is often different behavior exhibited as a result of the use of the new technology by this group of users. The creative minds of this youths may also increase along positive and negative directions.

Youth all over the world have one common objectives and that is experimenting new ideas arising from the use of a new technology, which often changes their behavior pattern and exposing them to early things of adult life, though experience quick development but may come in the negative.

2.2.3 Objective of the Study

The main objective of this study is to determine the adoption of new technology and its effect on the behavior of youths in Benin-City, Edo State, Nigeria. This main objective is broken down to two specific objectives as follows: to assess the impact of the adoption of new technology to development of the youths in Benin-city; The second objective is to ascertained how the adoption of new technology impact on the perceived creativity of the youths in Benin-City, Edo State, Nigeria.

2.2.4 Hypotheses

The study is premised on the following hypotheses:

2.3 Hypothesis Development

In examining the adoption of new technology and its effect on the behavior of youths in Benin-City, Edo State, Nigeria, it is necessary to look at how the development of the youths, and perceived creativity as a behavior will be exaggerated by the adoption of new technology by the youths in Benin-City, Edo State, Nigeria.

The youths have become so exposed to life so quickly as a result of the adoption of new technology at their early life. These exposure may be of two folds i.e. negative and positive depending upon the level of exposure and the purpose for which the new technology is meant to serve them. However, it could also enhanced their level of creativity. The technology adoption took its root from TAM by Rogers (1986) and passes through various developmental stages with the addition of new constructs. The following are the tested Hypotheses in this study.

H_{01}: There is no significant relationship between the youth knowledge development and the adoption of new technology in Benin-City, Edo State, Nigeria;

H_{02}: There is no significant relationship between perceived creativity of the youths and adoption of new technology in Benin-City, Edo State, Nigeria.

III. Research Methodology

This research started with a general literature review with an aim to define the research objectives and questions.Cross sectional design method was adopted in order to elicit data from respondents through the administration of a well-structuredquestionnaire which tries to gather data that aided in analyzing them in relations to the identified variables. Inparallel, a more focused literature review was carried out to develop a survey instrument. Afterwards, the survey validitywas conducted while the instrument shows a positive reliability and validity. The questionnaire templates were randomlydistributed among the youths using convenience sampling methods in Benin-City, Edo state, Nigeria. Thequestionnaire was divided into two sections of demographic characteristics and variables being analyzed. Each variableelicited questions that are related to capturing or measuring the said variable. The population of this study is basically the youths in Benin-City, however sample size of 140 was obtained by convenience sampling methods. A minimum of Cronbach alpha value of 0.7was obtained from the pilot study conducted showing the reliability of the instrument, while the instrument was subjectedto content validity, which is expert opinion validity as used in (Osuagwu, 2004).

The analysis of the study was conducted using descriptive and inferential statistics done through correlation andregression analysis. Specifically; Pearson Product Moment Correlation was used to measure the relationship between the study variables.

IV. Analysis, Results and Discussion of findings

The table below represents the responses from the respondents.

Table 1: Respondents responses to Social Interactions

S/N	Variables	SA	A	FA	D	SD
1	New technology uses could expose youths to things of life that were not known before	98	22	20	0	0
2	Adoption of new technology could lead to acquisition of new knowledge	62	70	8	0	0
3	New technology adopted by the youths could makes them feel belonging by increasing their intelligence	56	68	16	0	
4	The adoption of new technology could expose the youths to the world issues of life	74	46	10	10	0
5	Adoption of new technology could connect you with friends you may not otherwise see for life	102	34	4		0

Source: Field Survey, 2019

Table 1 shows responses by respondents in the questionnaire distributed and given as follows: Statement 1 to 5 shows that majority of the respondents representing over 130 (93%) agreed that the adoption of new technology by the youths has positive relationship with their behavior through the exposure to things of life, acquisition of new knowledge, increase in intelligence and being exposed to the outside world for new positive knowledge. This means that the adoption of new technology will lead to quick knowledge development.

Table 2: Pearson Product Correlation for social interaction

	Adoption of technology	Knowledge development
Pearson	1	.562
Adoption of technology Correlation		.000
	140	140
Sig. (2-tailed)	.562	
		1
N	.000	
	140	140
Pearson Knowledge development Correlation		
Sig. (2-tailed) Sig. (2-tailed)		
N		

Source: Field survey, 2019

Correlation is significant at the 0.01 level (2-tailed).

Table 2 shows the significant relationship between the youth knowledge development and adoption of new technology. The correlation coefficient (r) of knowledge development is .562 and the significance level is 0.01 ($p<.01$). The null hypothesis was therefore rejected concluding that there is a relationship between knowledge development and adoption of new technology in Benin-City.

Table 3: Responses to Perceived creativity

S/N	Variables	SA	A	FA	D	SD
1	The adoption of new technology exposes youths to new ways of thinking	60	68	12	0	0
2	Broadens the understanding of young populations including those of less privileged family members	49	56	25	10	0
3	Adoption of new technology improves the creative thinking of the youth	78	33	21	8	0
4	Adoption of new technology by the youths gives them better concentration	48	52	28	12	0

Source: Field Survey, 2019

Table 3 shows responses by respondents to the questionnaire distributed and given as follows: Statement 1 to 4 shows that majority of the respondents representing over 120(85%) agreed that the adoption of new technology has significant effect on the perceived creativity on the youths who are the respondents in this study. Meaning that if the youths avail themselves of new technology their creative thinking will be enhanced.

Table 4: Pearson Product Correlation for social interaction

	Adoption of technology	Perceived Creativity
Pearson	1	.498
Adoption of technology		
Correlation		.000
	140	140
Sig. (2-tailed)	.498	
		1
N	.000	
	140	140
Pearson		
Perceived Creativity		
Correlation		
Sig. (2-tailed)		
N		

Source: Field survey, 2019

Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the significant relationship between the youths perceived creativity and adoption of new technology. The correlation coefficient (r) of knowledge development is .498 and the significance level is 0.01 ($p<.01$). The null hypothesis was therefore rejected concluding that there is a relationship between perceived creativity by the youths and adoption of new technology in Benin-City.

V. Conclusion and Recommendation

5.1 Conclusion

Based on the research analysis, hypothesis testing and interpretation of results it was observed that early development and perceived creativity all have a place in new technology adoption by the youths in Benin-City, hence both constructs has positive relationship with the adoption of new technology. However, findings shows that the adoption of new technology by the youths could broadened their knowledge capacity by exposing them to things of life, increasing their intelligence as they could assess any information required to answer their worries through the internet, expose them to world issues, and remotely connecting them to their peer groups. Findings also indicates that the youths by adoption of new technology also expose them to new ways of thinking, it does not limit them to their background that is, from privileged and less privileged background are equally exposed.

5.2 Recommendation

Given the importance attached to this categories of individuals in the society especially as the future of any nation is largely dependent upon them, it is recommended that the youths be encouraged to pay serious attention to the adoption of new technology so that by this:

- They are exposed to things of life at this early stage of their existence;
- For those already exposed could increase their exposures;
- Increase their intelligence by global information available to them through the net;
- They are expose to current issues world over and
- Are connected to their peer groups and hence exchange knowledge.

It is also recommended that the adoption of the new technology by the youths will expose them to new ways of thinking in order to improve their perceived creativity, and gives them better concentration as they works through life.

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