12-3-2018

# Factors Influencing Behavioral Intention to the Use of Information and Communication Technology (ICT) among Students of Federal Polytechnic, Ilaro. Ogun state. Nigeria

Oludayo Babalola

olubabalola32@gmail.com

# FACTORS INFLUENCING BEHAVIORAL INTENTION TO THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AMONG STUDENTS OF FEDERAL POLYTECHNIC, ILARO.OGUN STATE. NIGERIA

BY

**BABALOLA  Stephen Oludayo**
**Department of Library**
**The Federal Polytechnic, Ilaro,**
**Ogun State.**
**Email: olubabalola32@gmail.com**

09054628575.

**ABSTRACT**

*The significance of Information and Communication (ICT) in Polytechnic education cannot be over-emphasized. The introduction of ICTs has tremendously assisted the libraries in their routine duties such as charging and discharging library materials, checking in and checking out users, library registration, recall of library materials indexing, cataloguing and classification The aim of the study is to examine the factors that influence the behavioral intention to use ICT among Polytechnic students in Nigeria. The study adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) constructs. Extant Literature on the UTAUT and ICT influence the behavioral intention to use ICT among students were discussed. Extant literature indicates that we are now in the new generation in which young people accept digital technologies based on some reason.s Quantitative approach was employed through the use of survey method. 500 copies of a questionnaire were administered on the students of the Federal Polytechnic, Ilaro out of which three hundred and forty five were returned (345) which indicated a return rate of sixty nine percent (69%). The findings of the study indicate that social influence and performance expectancy were the major constructs of the*

*theory that influence the behavioral intention to use ICT. Based on the findings of the study the following recommendations were made: the Polytechnic should create more awareness about  ICT usage among students, recognize and reward good ICT users among the students, create more ICT facilities and infrastructure for the students and advertise the ICTs in the libraries to all students*

**INTRODUCTION**

Polytechnic education around the world has been agent of development of their immediate communities and the world at large through research that leads to advancement in knowledge in different areas of human existence (agriculture, science and technology, medicine, law, religion, politics, arts among others). Owolabi and Attama (2010) note that this is made possible through the advent of ICT development. The essence of Polytechnic education in Nigeria is to provide middle level man power for public and private institutions in the country. Looking at the mandates of Polytechnic education in Nigeria educational system. It is not gain saying that ICT training and knowledge have a great role to play in achieving the mandate in order for our polytechnic graduates to be able to competent with their other counter parts all over the world.

The federal Polytechnic, Ilaro was created in 1979 by the federal Government of Nigeria and it is situated in Yewa south, Ogun state of Nigeria. It has since developed into a standard higher institution.

Extant literature indicates that we are now in the new generation in which young people accept digital technologies based on some reasons. The advent of the internet are said to have an innate aptitude and high skills level when it come to the students use of new technologies which has brought a paradigm shift to teaching and learning  (Jones, Ramanau, Cross and Healing, 2010).  Students are using ICT skills and knowledge in their teaching and learning. The diffusion of ICT into Polytechnic education and the consequent realization of its benefits will be subject to the acceptance of the resources by the polytechnic students  (Venter, Van Rensburg and Davis, 2012).

Recent developments globally show that Information and Communication Technologies (ICTs) have permeated all fields of human endeavor, including educational system particularly technical education in which polytechnic is inclusive. Looking at the importance of ICT in education,  Minishi –Majanja (2007) argues that ICT is a powerful tool that promote effective development . This indicates that adequate usage of ICT in Polytechnic education will bring about significant impact on the economic, scientific, social, political and technological development of Nigeria and other developing countries in the world. In another development Gubahar (2008) states the relevant of ICT in technical education as a enabler that can transform every nation to high level of development. ICT in this regard are relevant resources that facilities the production, transmission and processing of information  Example of these are include computer facilities (computers, scanners, printers, UPS and power point projectors); computer software resources (online databases, CD-ROMs, library application software, Internet and storage media); audio-visual media/equipment (satellite connection, digital cameras, video compact disk (VCD), digital video disk (DVD) radio, television, audio tapes, video tapes and photocopiers; and communication media (telephone-intercom and global system of mobile

The use of ICT becomes a social phenomenal among various professionals in healthcare delivery, education, law transport and host of other. However, there is

paucity of literature on acceptance of it among polytechnic students in Nigeria. Extant literature indicates that there is need to promote research on ICT adoption and usage among students in the polytechnic education in Nigeria Owolabi and Attama (2010). Lin and Cheng (2015), point out what factor that determines user acceptance and use of technology such as ICT is actually the user's intention. Based on this there is need to examine the meaning of user acceptance theory There are many theories relevant to a study of user acceptance of ICT and many of these theories focus on people's intention to engage in a particular behavior (i.e. adoption and use of ICT) as a relevant conceptual framework. Olasina (2014) notes that research on access and use of information and communication has been informed by a number of theories which include the following are among the accepted models :UTAUT by Venkatesh et al. (2003) , Theory of Reasoned Action (TRA) (Fishbein and Ajzen 1975), The Theory of Planned Behaviour (TPB) (Ajzen 1991),The Technology Acceptance Model (TAM) (Davis 1989), the Combined-TAMTPB (Taylor and Todd 1995), Model of PC Utilization (MPCU) (Thompson et al. 1991), Motivational Model (MM) (Davis et al., 1992), Social Cognitive Theory (SCT) (Bandura 1986), Innovation Diffusion Theory (IDT) (Rogers 1995) , IS Successful Model (DeLone and Mc Lean, 2003) and Technology Fit Model (Goodhue and Thompson,1995). All these theories are being widely used in ICT acceptance related research. In addition, failure of users to accept the use of technology in any organization will constitute a big hindrance to the successful adoption of information technology system in such organization. David et al (1993) had early noted that user acceptance is an important determinant of the success or failure of any new information and communication technology project introduced to a system. From the foregoing, user acceptance can be described as the ability and willingness of user groups to employ technology for the tasks it is designed to perform or support.

**STATEMENT OF PROBLEM**

Despite the fact that literature exist on ICT use in polytechnic education, no study has been conducted to examine the factors influencing behavioral intentions to the acceptance and use of Information and Communication Technology (ICT) among

Students in Federal Polytechnic, Ilaro.Ogun State. Nigeria. In addition, extant literature revealed that there is paucity of literature on acceptance and use of ICT usage among polytechnic students in Nigeria generally. Some research has been conducted in this area in developed countries which is not of the same environment with us. Therefore, this research would conduct a study on acceptance and use of ICT among polytechnic students in Nigeria. In addition, a review of literature indicates that the Unified Theory of Acceptance and use of technology (UTAUT) has received only limited validation in educational setting in the continent particularly in Nigeria. This is another gap that the study would like to fill.

Furthermore, Kaplan and Kimberly (2009) state that some adoption of ICT in many higher institutions in Africa failed (over 40% ). They attribute the failure to inability to conduct research on various factors that will promote acceptance and use of ICT usage. Since ICT adoption in any polytechnics is the function of the students to accept and use the technology. Based on the foregoing, the research has adopted the Unified Technology Acceptance and Use (UTAUT) Theory to unravel students' behavioral intentions regarding ICT In the Federal Polytechnic Ilaro, Nigeria.

**Objective of the study**

- To find out the factors that most influential in the acceptance and use of ICT among the polytechnic students at the Federal Polytechnic students, Ilaro.

**Research question**

In this paper, we sought for the answer to this question

- Which of the factors are the most influential in the acceptance and use of ICT among the students of Federal Polytechnic, Ilaro.

**LITERATURE REVIEW**

Davis, Bagozzi and Warshaw (1989) note that user acceptance is an important determinant of the success or failure of any new ICT project that is introduced into a system. From the foregoing, user acceptance can be described as the ability and willingness of user groups to employ a technology for the tasks that it is designed to    perform or support. However, this study will employ the use of UTAUT ( Owolabi, 2016)    .The theory was developed through the review and integration of eight dominant theories and models, namely: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model, the Theory of Planned Behavior (TPB), a combined TBP/TAM, the Model of PC Utilization, Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT). These contributing theories and models have all been widely and successfully utilized by a large number of previous studies of technology or innovation adoption and diffusion within a range of disciplines including information systems, marketing, social psychology, and management. In their original article, Venkatesh et al. (2003) presented results from a six-month study of four organizations, which revealed that the eight contributing models explained between 17 and 53 per cent of variance in user intentions to use IT.

However, UTAUT was found to outperform the eight individual models with an adjusted $R^2$ of 69 per cent (Venkatesh et al., 2003). In the years since its introduction, UTAUT has been widely employed in technology adoption and diffusion research as a theoretical lens by researchers conducting empirical studies of user intention and behavior. At the time of writing, the original article Venkatesh et al. (2003) has been cited just under 5,000 times, with UTAUT being discussed with reference to a range of technologies (including the internet, web sites, Hospital Information Systems, Tax Payment Systems and Mobile Technology among others) with different control factors (such as age, gender, experience, voluntariness to use, income, and education), and focusing upon a variety of user groups (for instance, students, professionals, and general users). The UTAUT theory identifies four key constructs that directly determine user acceptance and usage of technology, namely performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC), and four

control variables, namely gender, age, experience, and voluntariness of use (Liu 2013, 30).

Performance expectancy is about the perceived benefits a user believes will be gained from using the technology in his or her job, either to improve productivity or the quality of services (Cohen, Bancillion and Jones, 2013:45). Venkatesh et al. (2003) describe performance expectancy as the degree to which an individual believes that using ICT would assist him or her with achieving better results. Performance expectancy is basically about the benefits that the user will enjoy, with the new technology compared to the old system, in relation to job performance. The authors reveal that performance expectancy is the strongest determinant of behavioural intention. It is well recognised in user acceptance studies that users' intentions to use a new technology are determined primarily by the perception that such a technology would be advantageous and increase job performance (Davis, 1989).

 Effort expectancy is "the degree of ease associated with the use of a system" (Venkatesh et al., 2003). Effort expectancy can be described as the degree of ease of access and use of technology (Venkatesh et al., 2003). There are three constructs that capture the concept of effort expectancy. These are perceived ease of use (TAM/TAM2), complexity (MPCU) and ease of use (IDT) (Venkatesh et al., 2003:450). Effort expectancy shares a lot of similarities with the TAM's perceived ease of use.  Zhang et al. (2010) found out that the Perceived Ease of Use (PEOU) of the TAM theory, which is related to effort expectancy, had a significant effect on the adoption of clinical informatics by doctors. Almulhen (2015), likewise, noted that students and other professionals' impression on the use of ICT is one of the factors that determine ICT usage. This implies that attitude and ease of use of ICT by the students will determine its use.

Social influence can be described as the extent to which an individual places importance on others' belief that he or she should use (or not use) a new

technology (Venkatesh and Davis, 2000). Venkatesh et al. (2003) describe social influence as the extent to which an individual allows the opinions of others to influence his/her decision to use a system. This construct is related to TRA, TAM, TPB and C-TAM-TPM, and it can also be traced to MPCU and DOI as social factors.

Studies have shown that, an individual's intention to use a new technology can be influenced by the views, opinions and perceptions of the people around him or her, particularly in his/ her immediate environment (Venkatesh and Davis, 2000). According to Venkatesh et al. (2003), "individuals are more likely to comply with others expectations when those referent others have the ability to reward or punish non-behaviour" Social influence among polytechnic students use of ICT is tied to their friends and colleagues perception about their attitude to the use of ICT. Negative attitude of their friends may influence them from using the tools.

A facilitating condition is an individual's belief regarding the existence of adequate technical infrastructure as well as management policies and other internal support mechanisms that will encourage the use of the technology (Venkatesh et al., 2003). Facilitating conditions refer to the degree to which users believe that organizational and technical infrastructure will support the use of Information and Communication Technology (Venkatesh et al., 2003). Facilitating conditions are related to the TAM's perceived ease of use, combined facilitating conditions (MPCU), and compatibility (DOI).

Methodology

The study is a survey design. The sample for the study was drawn from the students in all the academic departments in the Polytechnic which involve both students in National Diploma and Higher National Diploma. A total number of 500 questionnaires were distributed in which 345 students returned the questionnaire which -----returned rate. Based on this the research continue with the study. Convenience sampling was used in the distribution of the questionnaires. The twenty-five questionnaire items were adapted from the

UTAUT study of Venkatesh et al (2003). The items represent both independent and dependent variables that was employed in the study. The questionnaire was designed to examine the factors that influence behavioral intention to use ICT by the polytechnic students. Validated questionnaire was used and the words were modified to fit the specific technology under investigation.

**Results and Findings**

**Figure 1: Distribution of respondents by gender**
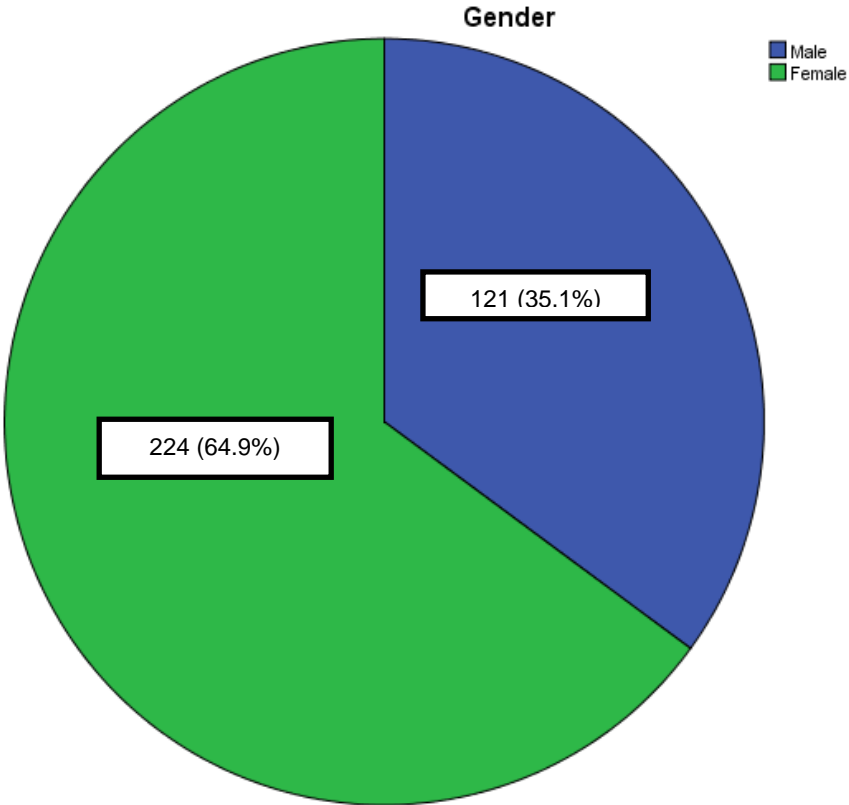


The distribution of respondents by gender as presented in Figure 1 indicated that female constituted the majority of the respondent with frequency count of 224 (64.9%). The male were 121 (35%)

**Gender**

|  |  | Frequency | Percent | Mean | Standard Deviation |
|---|---|---|---|---|---|
|  | Male | 121 | 35.1 |  |  |
| Valid | Female | 224 | 64.9 | 1.65 | 0.478 |
|  | Total | 345 | 100.0 |  |  |

**Figure 2: Respondents age range**
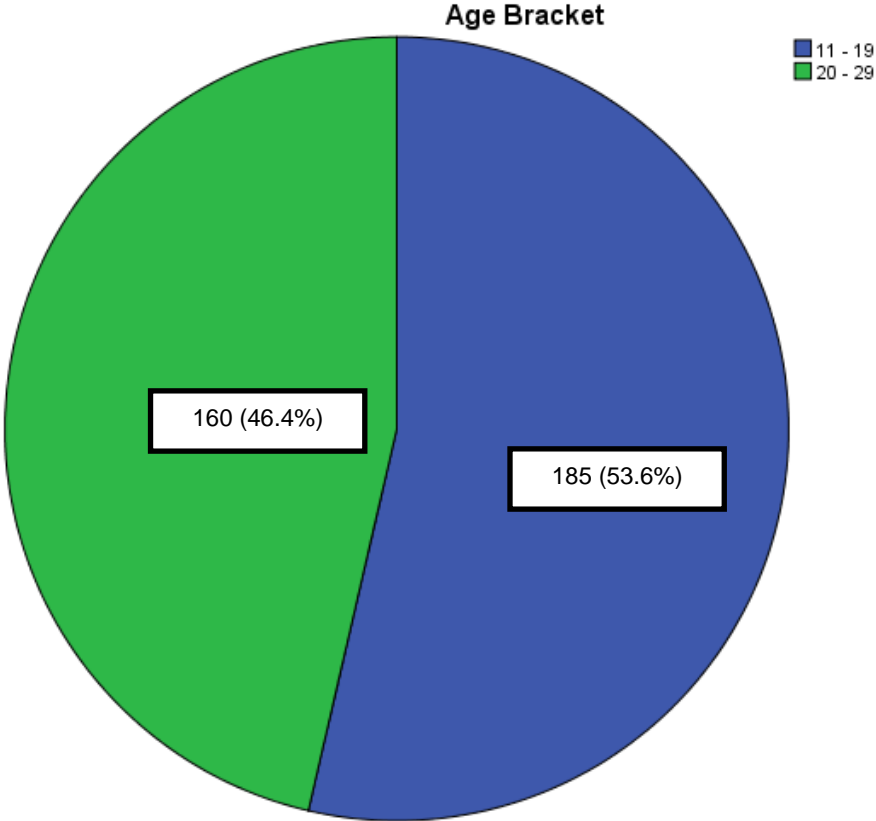


The age range of respondents as revealed in figure 2 shows that majority 185 (53.6%) of the respondents were between 11 – 19years  and 160 (48.4%)  were 20 – 29years

**Age Bracket**

| | | Frequency | Percent | Mean | Standard Deviation |
|---|---|---|---|---|---|
| | 11 - 19 | 185 | 53.6 | | |
| Valid | 20 - 29 | 160 | 46.4 | 1.46 | 0.499 |
| | Total | 345 | 100.0 | | |

**Figure 3:  School of respondents**

**Name of School**
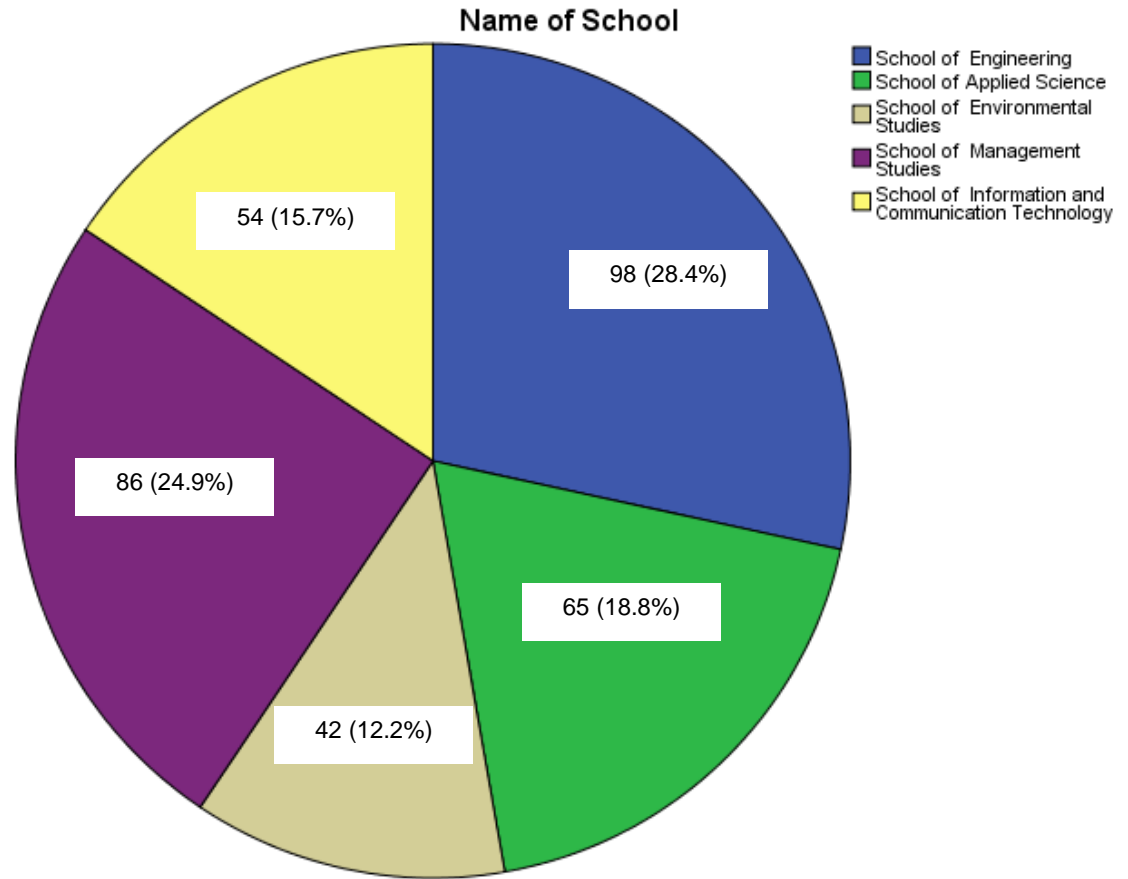
School of respondents as revealed in figure 3 showed that respondents from School of Engineering constituted the majority 98 (28.4%) , followed by School of Management 86 (24.9%), School of Applied Science 65 (18.8%), School of Information and Communication Technology 54 (15.7%) and School of Environmental Studies 42 (12.2%).

**Name of School**

|  | Frequency | Percent | Mean | Standard Deviation |
|---|---|---|---|---|
| School of  Engineering | 98 | 28.4 | 2.81 | 1.4 |
| School of Applied Science | 65 | 18.8 | | |
| School of  Environmental Studies | 42 | 12.2 | | |

| | | | |
|---|---|---|---|
| School of Management Studies | 86 | 24.9 | |
| School of Information and Communication Technology | 54 | 15.7 | |
| Total | 345 | 100.0 | |

**Figure 4: Level of study of respondents**



Level of Study

33 (9.6%)

43 (12.5%)

216 (62.6%)

53 (15.4%)

ND1
ND2
HND1
HND2
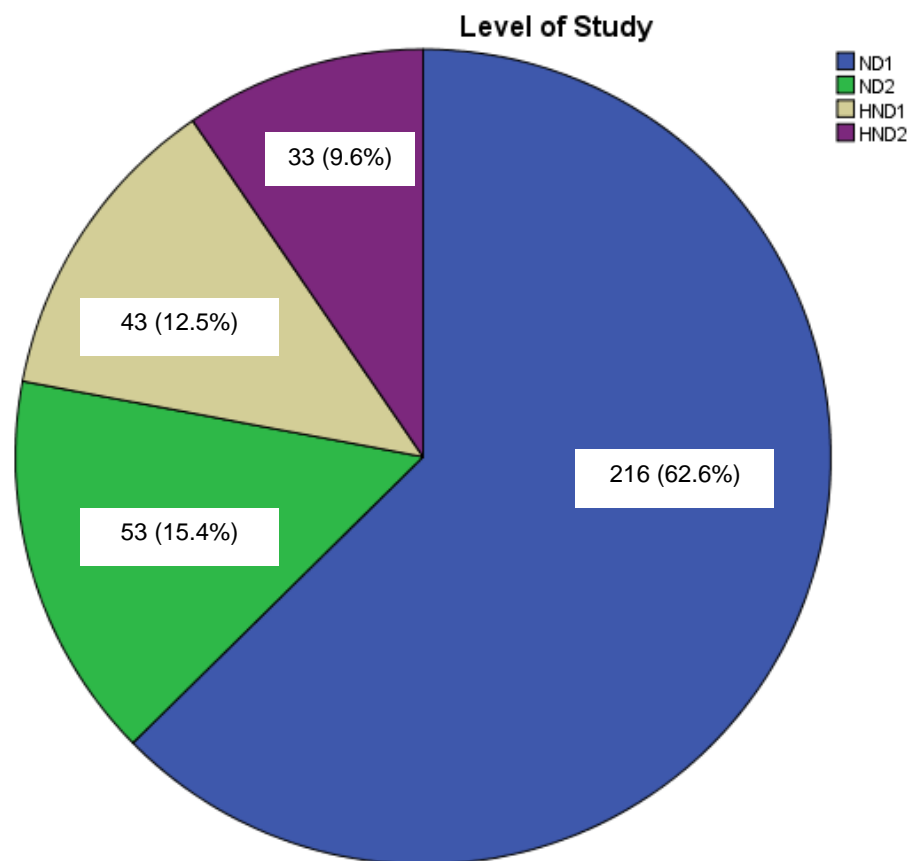
The level of study of respondents revealed that majority 216 (62.6%) of the respondents were ND1, followed by 53 (15.4%) in ND2, 43 (12.5%) and 33 (9.6%) in HND1 and HND2 respectively.

**Level of Study**

|  | Frequency | Percent | Mean | Standard Deviation |
| --- | --- | --- | --- | --- |
| ND1 | 216 | 62.6 | 1.69 | 1.020 |
| ND2 | 53 | 15.4 | | |
| HND1 | 43 | 12.5 | | |
| HND2 | 33 | 9.6 | | |
| Total | 345 | 100.0 | | |

**Figure 5: Mode of Study**



Mode of Study
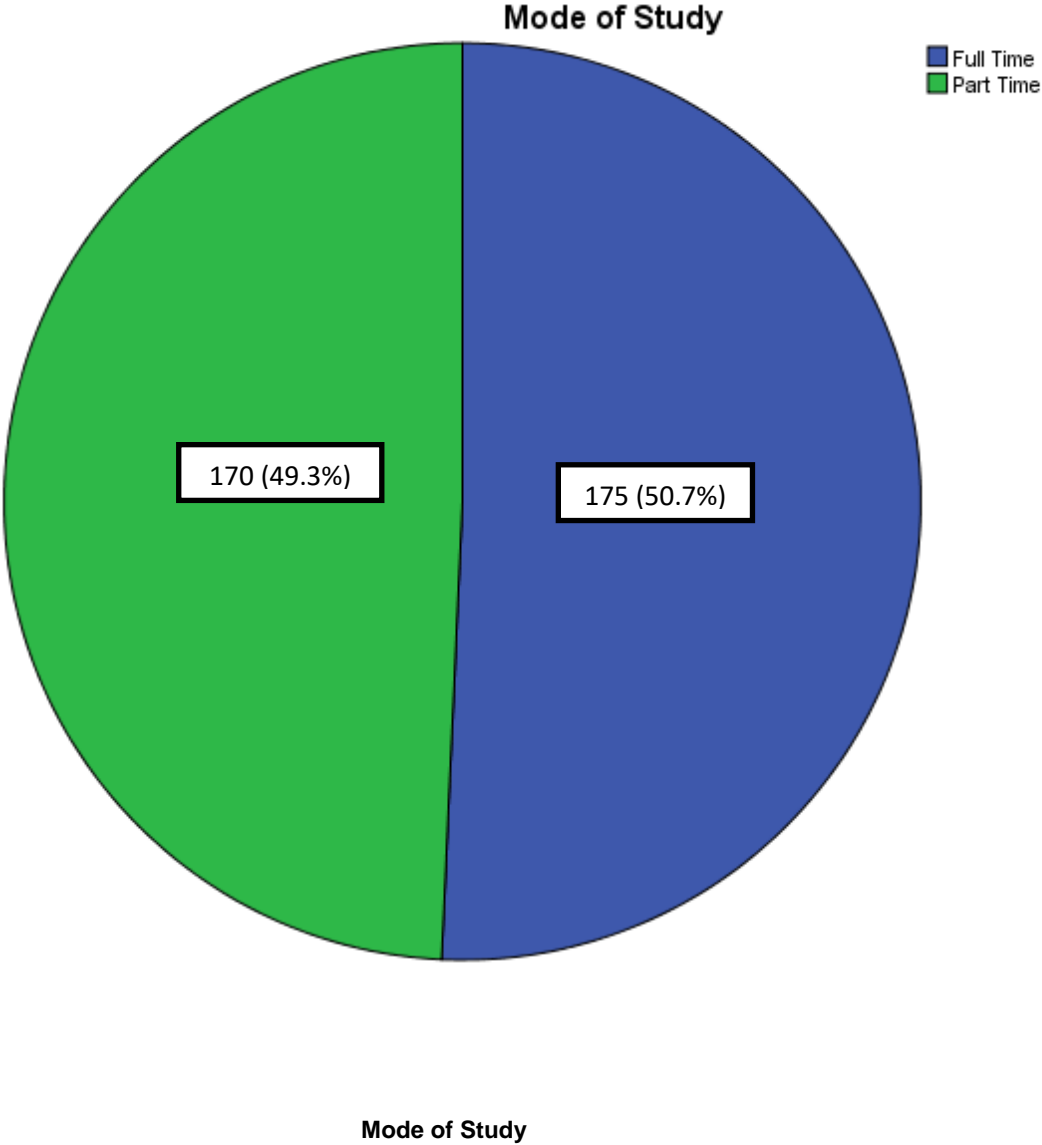
| | Frequency | Percent | Mean | Standard Deviation |
|---|---|---|---|---|
| Full Time | 175 | 50.7 | 1.49 | 0.501 |
| Valid Part Time | 170 | 49.3 | | |
| Total | 345 | 100.0 | | |

Table 1: .**Perceived factors that influence students' behavioral intention to use ICT**

| Performance Expectancy (PE) | SA (%) | A (%) | D (%) | SD (%) | X | SI |
|---|---|---|---|---|---|---|
| I find ICT useful for my Course of study | 89 (25.8) | 156 (45.2) | 60 (17.4) | 40 (11.6) | 2.85 | 0. |
| Using ICT enables me to accomplish tasks more quickly | 145 (42.0) | 100(29.0) | 10(2.9) | 90(26.1) | 2.87 | 1. |
| Using ICT improves my academic performance | 178(51%) | 67(19.4) | 40(11.6) | 60(17.4) | 3.05 | 1. |
| Using ICT saves time | 143(41.4) | 102(29.6) | 50(14.5) | 50(14.5) | 2.98 | 1. |

Majority 245 (71.0%) of the respondent found ICT useful for their course of

study, ICT enables their quick accomplishment of task, it improves their academic

performance as well as save their time

| Social Influence (SI) | SA (%) | A (%) | D (%) | SD (%) | X | SI |
|---|---|---|---|---|---|---|
| People who influence my behavior think that I should use ICT | 121(35.1) | 173(50.1) | 30(8.7) | 21(6.1) | 1.86 | 0. |
| People who are important to me think | 151(43.8) | 144(41.7) | 20(5.8) | 30(8.7) | 1.79 | 0. |

| | | | | | | |
|---|---|---|---|---|---|---|
| that I should use ICT | | | | | | |
| My seniors in the course have been helpful in training me in the use of ICT | 197 (57.1) | 77 (22.3) | 41 (11.9) | 30 (8.7) | 1.67 | 0. |
| In general, the Polytechnic has been supporting me in the use of ICT | 175(50.7) | 130(37.7) | 20(5.8) | 20(5.8) | 1.65 | 1. |

A total number of 305 (88.4%) of the students agree that the Polytechnic has been
supporting their use of ICT. This is closely followed by 295 (85.5%) and 294
(85.2%) who admitted that People who are important to them and influence their
behavior think that they should use ICT.

| Effort Expectancy (EE) | SA (%) | A (%) | D (%) | SD (%) | X | S |
|---|---|---|---|---|---|---|
| I know it will be easy for me to become skillful at using ICT | 231(67.0) | 44(12.8) | 30(8.7) | 40(11.6) | 1.82 | 0. |
| I find the ICT tools easy to use | 151(43.8) | 134(38.8) | 30(8.7) | 30(8.7) | 1.75 | 0. |
| Learning to operate the ICT tools is easy for me | 177(51.3) | 108(31.3) | 30(8.7) | 30(8.7) | 2.92 | 1. |

Majority 285 (82.6%) of the respondents claimed that they found the ICT tools
easy to use and Learning to operate the ICT tools is easy for them. This is
followed by respondents who confirmed that it will be easy for them to become
skillful at using ICT 235 (79.8%).

| Facilitating Condition (FC) | SA (%) | A (%) | D (%) | SD (%) | X | SI |
|---|---|---|---|---|---|---|
| My Polytechnic has the support system necessary to use ICT | 60(17.4) | 40(11.6) | 112(32.5) | 133(38.6) | 2.92 | 1 |
| My organization motivates me to use ICT | 20(5.8) | 80(23.2) | 100(29.0) | 145(42.0) | 3.09 | ( |
| ICT department helps to organise training on the use of ICT tools | 70(20.3) | 30(8.7) | 100(29.0) | 145(42.0) | 2.93 | 1 |

Majority 245 (71.1%) of the respondents disagree to the statements that their
Polytechnic has the supporting system necessary to use ICT, their organization
motivates them to use ICT and that the ICT department helps to organise training
on the use of ICT tools respectively.

| Behavioral Intention to Use the System | SA (%) | A (%) | D (%) | SD (%) | X | SI |
|---|---|---|---|---|---|---|
| I intend to use ICT in the work regularly | 142(41.2) | 151(43.8) | 21(6.1) | 31(9.0) | 1.83 | ( |
| I would use ICT any time I am in the Polytechnic | 172(49.9) | 131(38.0) | 32(9.3) | 10(2.9) | 1.65 | ( |
| I plan to use ICT any time my academic requires it. | 217 (62.9) | 77 (22.3) | 31 (9.0) | 20 (5.8) | 1.58 | ( |

Note: *SA- Strongly Agree, A-Agree, D-Disagree, SD-Strongly Disagree*, X- Mean
and SD – Standard Deviation

A total number of 303 (87.9%) of the respondents admitted that they would use
ICT any time they were in the Polytechnic. This is followed by 294 (85.2%) and
293 (85.0%) who affirmed that they plan to use ICT any time their academic
requires it as well as using ICT in their work regularly

2  **Benefits of using ICT**

| Benefit of ICT | SA (%) | A(%) | D (%) | SD (%) | X | SD |
|---|---|---|---|---|---|---|
| ICT can reduce errors | 164 (47.5) | 106 (30.7) | 43 (12.5) | 32 (9.3) | 1.83 | 0.973 |

| | | | | | | |
|---|---|---|---|---|---|---|
| It saves the time of students | 195 (56.5) | 120 (34.8) | 10 (2.9) | 20 (5.8) | 1.58 | 0.807 |
| ICT improves efficiency | 229 (66.4) | 96 (27.8) | 10 (2.9) | 10 (2.9) | 1.42 | 0.691 |
| Reduces adverse boredom | 130 (37.7) | 174 (50.4) | 21 (6.1) | 20 (5.8) | 1.80 | 0.795 |
| Reduction of cost | 120 (34.8) | 164 (47.5) | 41 (11.9) | 20 (5.6) | 1.89 | 0.829 |
| Increases the performance of students | 141 (40.9) | 173 (50.1) | 11 (3.2) | 20 (5.8) | 1.74 | 0.779 |
| User friendly | 187 (54.2) | 128 (37.1) | 20 (5.8) | 10 (2.9) | 1.57 | 0.732 |
| Hyperlinks increases search efficiency | 150 (43.5) | 143 (41.4) | 32 (9.3) | 20 (5.8) | 1.77 | 0.843 |
| Removes geographical limitations to resources | 119 (34.5) | 172 (49.9) | 43 (12.5) | 11 (3.2) | 1.84 | 0.758 |

Majority 325 (94.2%) of the respondents admitted that ICT improves efficiency. This followed by 315 (91.3%) who confirmed that it saves their time and it is users friendly. Furthermore, 291 (84.4%) affirmed that ICT removes geographical limitations to resources.

**Table 2:** .**Purposes of using ICT by students**

| Purposes for using ICT | SA (%) | A (%) | D (%) | SD(%) | X | SD |
|---|---|---|---|---|---|---|
| In order to get information from internet for my course of study | 240 (69.6) | 55 (15.9) | 20 (5.8) | 30 (8.9) | 1.54 | 0.943 |
| In order to connect with friends and other people | 219 (63.5) | 65 (18.8) | 41 (11.9) | 20 (5.8) | 1.60 | 0.910 |
| In order to get information from subscribed databases for my course of study | 184 (53.3) | 88 (25.5) | 53 (15.4) | 20 (5.8) | 1.74 | 0.923 |
| Follow News | 217 (62.9) | 86 (24.9) | 31 (9.0) | 11 (3.2) | 1.52 | 0.789 |
| I use ICT to share knowledge with my fellow students | 196 (56.8) | 86 (24.9) | 43 (12.5) | 20 (5.8) | 1.67 | 0.905 |
| I use ICT for communication | 183 (53.0) | 98 (28.4) | 44 | 20 (5.8) | 1.71 | 0.900 |

| | | | (12.8) | | | |
|---|---|---|---|---|---|---|
| I use ICT to do and submit my assignments. | 166 (48.1) | 117 (33.9) | 31 (9.0) | 31 ()9.0 | 1.79 | 0.942 |
| I use ICT to get information from school authority | 197 (57.1) | 84 (24.3) | 44 (12.8) | 20 (5.8) | 1.67 | 0.909 |

The purposes for using ICT by the respondents revealed that 295 (85.5%) use ICTIn order to get information from internet for their course of study, followed by those who use ICT to do and submit their assignments 283 (82.0%). Furthermore, 282 (81.7%) use ICT to share knowledge with their fellow students, while, 272 (78.3%) use it to get information from subscribed databases for heir course of study.

**Table 3:  Uses of ICT tools**

| Types of ICT  Tool | Always | Often | Sometimes | Rarely | X | SD |
|---|---|---|---|---|---|---|
| Computer,           laptop, Desktop, IPad | 152 (44.1) | 86 (24.9) | 62 (18.0) | 45 (13.0) | 2.00 | 1.070 |
| Internet | 215 (62.3) | 67 (19.4) | 43 (12.5) | 20 (5.8) | 162 | 0.914 |
| Intranet systems | 175 (50.7) | 106 (30.7) | 31 (9.0) | 33 (9.6) | 1.77 | 0.965 |

Majority of the respondents 215 (62.3%) always use computer, laptop, desktop and IPad. in addition 175 (50.7%) uses intranet facilities, while, 152 (44.1%) uses internet facilities

**Table 4: Challenges facing the use of ICT among the students**

| Challenges facing the use of ICT | SA (%) | A (%) | D (%) | SD (%) | X | SD |
|---|---|---|---|---|---|---|
| Non-availability of desired ICT tools | 110 (31.9) | 162 (47.0) | 32 (9.3) | 41 (11.9) | 1.94 | 0.930 |
| Absence of sufficient training programmes on ICT | 128 (37.1) | 142 (41.2) | 43 (12.5) | 32 (9.3) | 2.21 | 1.02 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Poor ICT skills on the part of students | 33 (9.6) | 63 (18.3) | 161 (46.7) | 88 (25.5) | 1.93 | 1.05 |
| Lack of technical support | 153 (44.3) | 117 (33.9) | 22 (6.4) | 53 (15.4) | 2.15 | 1.02 |
| Limited and unreliable supply of electricity | 97 (28.1) | 163 (47.2) | 22 (6.4) | 63 (18.3) | 1.84 | 1.00 |
| Limited access to the Internet | 162 (47.0) | 119 (34.5) | 21 (6.1) | 43 (12.5) | 2.14 | 1.05 |
| Technophobia | 34 (9.9) | 62 (18.0) | 110 (31.9) | 139 (40.3) | 2.43 | 1.05 |
| I have negative attitude towards ICT | 74 (21.4) | 76 (22.0) | 75 (21.7) | 120 (34.8) | 1.72 | 0.98 |

Majority 281 (81.5%) of the respondents were faced with limited access to the Internet. followed by 272 (78.9%) who claimed that non-availability of desired ICT tools were their major challenge. Furthermore, 207 (78.3%) confirmed that absence of sufficient training programmes on ICT as well as lack of technical support hindered their use of ICT. While 249 (72.2%) of the students denied the statement that poor ICT skills on the part of students hindered their use of ICT.

**Test of Hypotheses**

**$H_{01}$: There is no significant influence of Performance Expectancy, Social Influence, Effort Expectancy, and Facilitating Condition on behavioural intention of the students of Ilaro polytechnic and use of ICT (Multiple Regression Analysis).**

**Figure 6: Graph showing the relationship between behavioral intention and performance Expectancy**
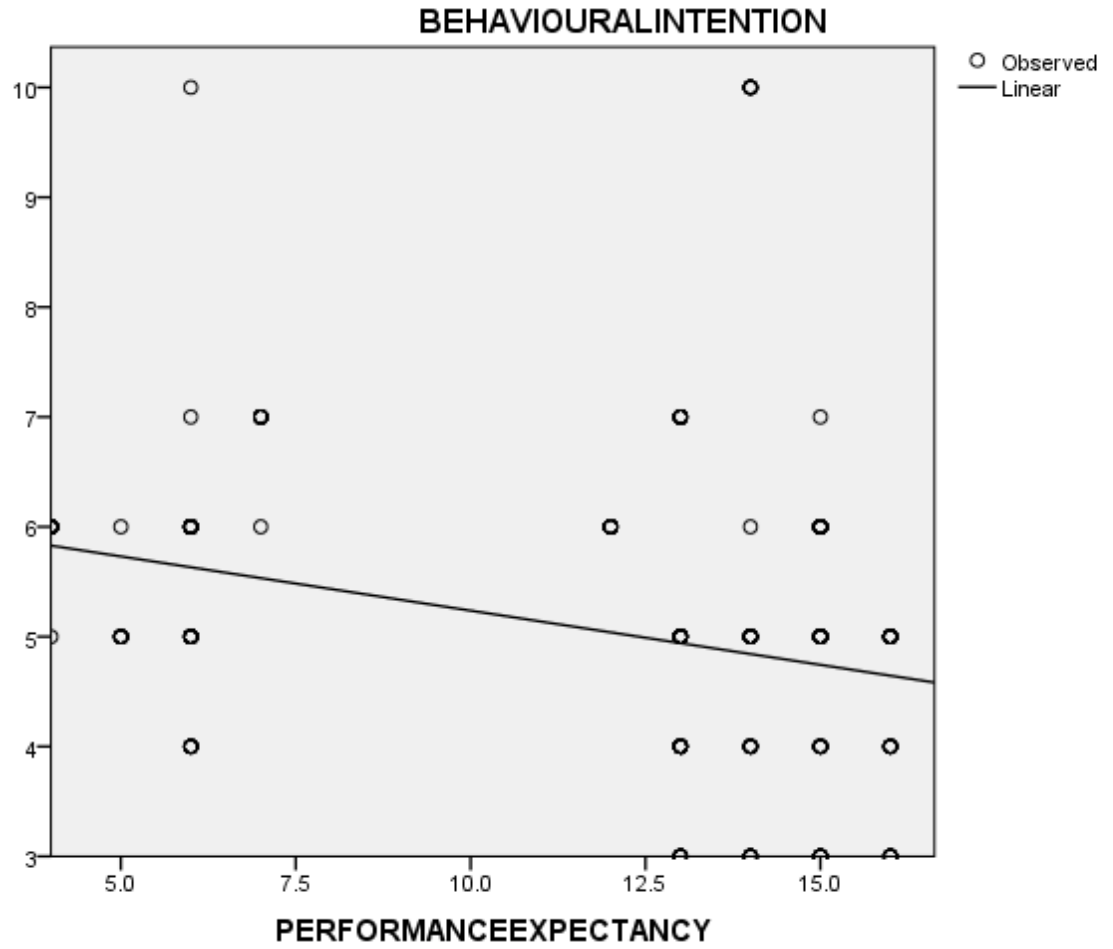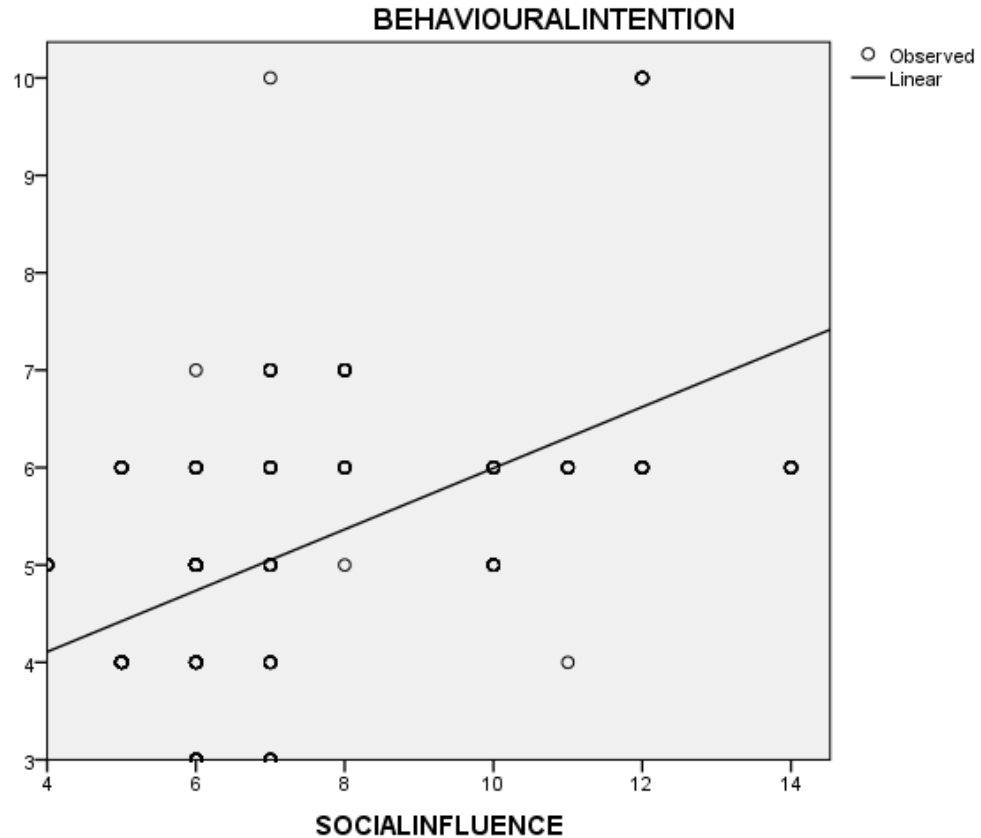
The graph indicated that there is no significant ($p < 0.05$) relationship between performance expectancy and behavioral intention of students to use ICT.

**Figure 7: Graph showing the relationship between behavioral intention and Facilitating Conditions**
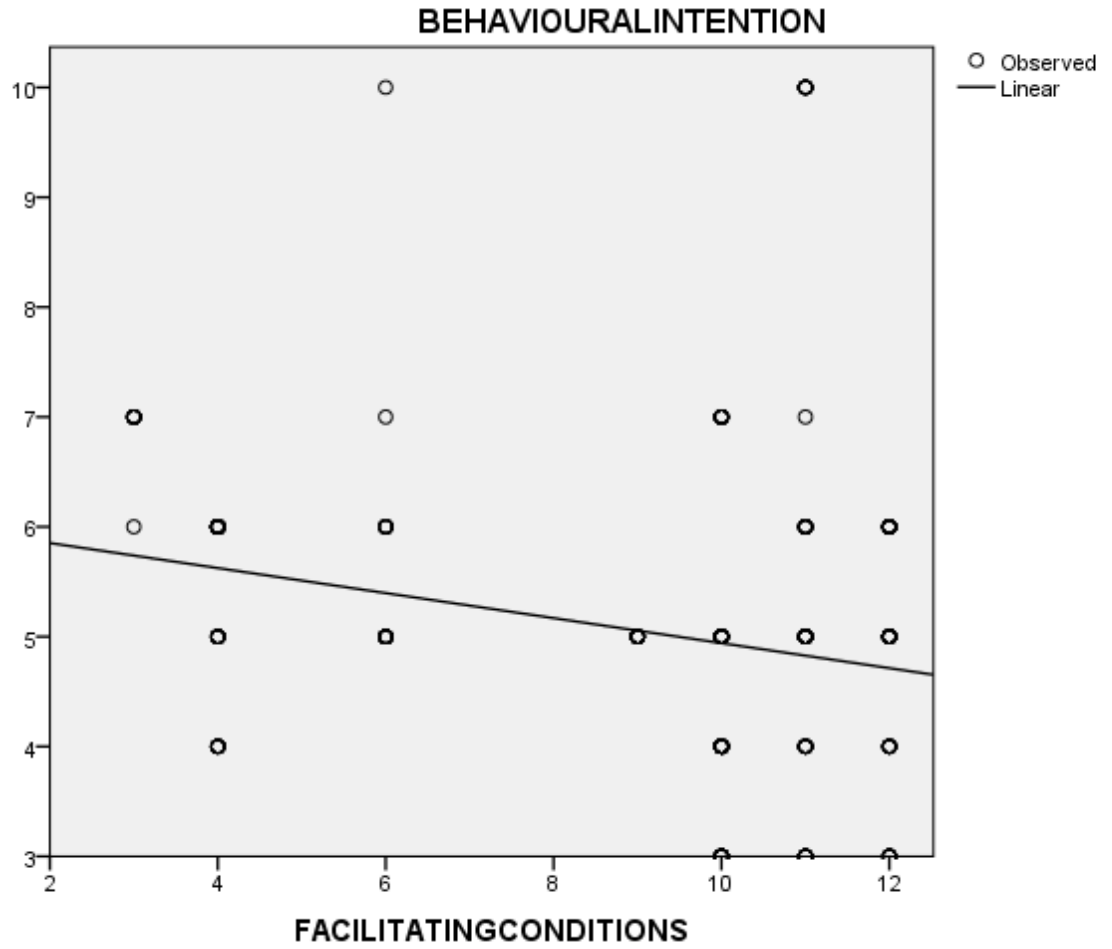
The graph indicated that there is no significant (p < 0.05) relationship between facilitating condition and behavioral intention of students to use ICT.

**Figure 8: Graph showing the relationship between behavioral intention and Social Influence**

The graph shown above indicated that there is significant (p < 0.05) relationship between social influence and behavioral intention of the students to use ICT. As an increase in one leads to increase in the other. That is social influence positively influence the behavioral intention and use of ICT by the students.

**Figure 9: Graph showing the relationship of behavioral intention and Effort Expectancy**

BEHAVIOURALINTENTION

The graph shown above indicated that there is significant (p <0.05) relationship between effort expectancy and behavioral intention of the students to use ICT. As an increase in one leads to increase in the other.

Table 5: Model Summary

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .553[a] | .306 | .298 | 1.161 |

a. Predictors: (Constant), Facilitating Conditions, Social Influence, Effort Expectancy, Performance Expectancy.

Table 6: ANOVA Table

**ANOVAᵃ**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 202.013 | 4 | 50.503 | 37.444 | .000ᵇ |
| | Residual | 458.584 | 340 | 1.349 | | |
| | Total | 660.597 | 344 | | | |

a. Dependent Variable: Behavioral intention

b. Predictors: (Constant), Facilitating Conditions, Social Influence, Effort Expectancy, Performance Expectancy.

Table 6: Coefficient Table

**Coefficient Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.220 | .432 | | 5.142 | .000 |
| | Performance Expectancy | -.001 | .036 | -.002 | -.014 | .989 |
| | Social Influence | .200 | .045 | .328 | 4.475 | .000 |
| | Effort Expectancy | .197 | .049 | .313 | 4.039 | .000 |
| | Facilitating Conditions | .047 | .046 | .101 | 1.013 | .312 |

a. Dependent Variable: Behavioral Intention

The factor influencing respondents behavioral intention to use ICT tools reveals

that social influence (SI)and effort expectancy (EE) ( $P < 0.05$) significantly

influence the behavioural intention of the students to use the ICT tools. While performance expectancy and facilitating condition (P> 0.05) did not have significant influence on the behavioral intention of the students to use the ICT tools.

The joint contribution of the four UTAUT independent variables (PE, EE, SI and FC) to the prediction of the dependent variable (BI). Shows a coefficient of multiple correlation (R=0.553 and a multiple $R^2$ of 0.306). This means that 3.06% of the variance was accounted for by the four predictor variable when taken together.

The significance of the composite contribution was tested at $p<0.05$. The result shows that the analysis of variance for regression yielded F-ratio of 37.444 (significant at 0.05). This implies that the joint contribution of the independent variables to the dependent variable was significant and that the other variable not included in this model may have accounted for the remaining variance.

**Discussion of the findings**

The basic findings of the study revealed that social influence and effort expectancy are the two of the UTAUT constructs that influence behavioral intentions of Polytechnic students to use ICT. This finding is in line with the finding of El-Gayar and Moran (2007) in similar research in United States of America. The finding of their research revealed that social influence and effort expectancy were two main constructions that influence students to use ICT in a university in the country. Likewise Gruzd (2012) indicated in his research that effort expectancy are the two of the UTAUT constructs that influence behavioral intention of the students to use ICT. Liao et al (2004) study in the South USA among the university students. The study revealed that  social influence played a significant role in the students use of ICT. (2004). Social influence and Effort

expectancy have been proven to be a key behavioral adoption factor among students in the use of ICT (Shaper and Pervan, 2007 and Roese et al.2005)    ). Likewise the result of the finding support the submission of Venkatesh et al (2003) and Hardgrave et al (2003) that the two constructs played significant role in the use ICT by various professionals. On the other hand, the result of the study confirms the finding of Liebenberg (2015) that revealed that social influence determine the use of ICT among students in USA.

**Conclusions and Recommendations**

The extent of the acceptance and use of ICT among the polytechnic students depends on their positive attitude toward the technology and the intention to use the technology. UTAUT indicated predictive and  accuracies toward behavioral intention to use ICT among various professionals and students. Social influence and efforts expectancy are the two main constructs that influence behavioral intention to use ICT among the polytechnic students in the study. Social influence and Effort expectancy are positively correlated with dependent variables. This may be attributed to the fact that respondents are students and they are being influence through their peer groups. Furthermore, it is well recognised in user acceptance studies that users' intention to use a new technology is determined primarily by the perception that such a technology would be advantageous assist them in their studies . The study suggests that more ICT laboratories should be established in the schools. The Polytechnic should create more awareness about ICT usage among students, recognize and reward good ICT users among the students Group assignment should be encouraged particularly to involve the use of ICT and ICT training should be included in the polytechnic curriculum this should be from OND to HND Classes. Higher institutions should create more awareness about the existence of ICTs in the libraries and be willing to procure more of the latrest ICTs for their libraries

**Contribution to knowledge**

The study contributes to discussion and debate on the UTAUT. Moreover, this study contributes to efforts to identify factors that influence ICT usage among the Polytechnic students in Nigeria and it will be of great benefits to the management of various polytechnics in Nigeria.

# Reference

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes,* 50(2), 179-211. Retrieved from https://pdfs.semanticscholar.org/6256/ca4853f44ab9acb98f91f0d7848c54185ca7.pdf Accessed on 4 June, 2018.

Almulhen, J. A. (2015). Importance of medical informatics in medical students' curricula in Saudi Arabia. A thesis submitted to the Department of Health care Informatics, University of Wiscoinsin –Milwaukee.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory: Englewood Cliffs Prentice –Hall: NJ

Cohen, Bancillion and Jones, 2013 Cohen, J. F. Bancihon, J. and Jones. M. (2013). South African physicians of e-prescribing technology: an empirical test of a modified UTAUT model. *South Africa Computer Journal* 50 (1), 43-50. Retrieved from http://sacj.cs.uct.ac.za/index.php/sacj/article/view/175 Accessed 13 Oct, 2018

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly,* 35(8), 982-1003. Retrieved from https://www.jstor.org/stable/249008?seq=1#page_scan_tab_contents Accessed on 12 June, 2018

DeLone, W. H. and Mclean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Information Systems Management.* 19(4), 9-30. Retrieved from https://pdfs.semanticscholar.org/e086/a205220b7746e08ce9b7e031f32e1714d25d.pd Accessed on 7 July, 2018.

Fishbein, M.and Ajzen, I. (1975). Belief attitude, intension and behaviour reading Massachuset:Addison-Wesley.

Gubahar, Y., ICT Usage in Higher Education: A Case study on Preservice Teacher and Instructors. The Turkish Online Journal of Educational Technology, 2008. 7(1).

Hamzat, Saheed and Mabawonku, Iyabo, "Influence of Performance Expectancy and Facilitating Conditions on use of Digital Library by Engineering Lecturers in universities in South-west, Nigeria" (2018).Library Philosophy and Practice (e-journal). 1620.https://digitalcommons.unl.edu/libphilprac/1620

Jones, C., Ramanau, R., Cross, S., & Healing, G. (2009). Net generation or digital natives: Is there a distinct new generation entering university? http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6VCJ-4XFXSPS-2-4&_cdi=5956&_user=1526876&_pii=S0360131509002620&_orig=search&_coverDate=04%2F30%2F2010&_sk=999459996&view=c&wchp=dGLzVzz-zSkzk&md5=41d1d800d15a15bd2583a5ec3bea8cd6&ie=/sdarticle.pdf accessed 21st October, 2018

Kaplan, B. and Kimberley, D. (2009). Health IT success and failure; recommendations from literature and AMIA workshop .*Journal of Medical Informatics Association* .16(3), 291-299 Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2732244/ Accessed on 29 July, 2016.

Kijsanayotin, Boonchai & Pannarunothai, Supasit & Speedie, Stuart. (2009). Factors influencing health information technology adoption in Thailand's community health centers: Applying the UTAUT model. International journal of medical informatics. 78. 404-16. 10.1016/j.ijmedinf.2008.12.005.

Liu, J. (2013). E-learning in English classroom; Investigating factors impacting on ESL (English as second language) the Modular Object-oriented dynamic learning environment (Mooodle Learning Environment (Moodle) Phd thesis Lowa State University.

Lin,T.C, Lai, M.C. and Yang, S.W. (2015). Factors influencing physicians' knowledge sharing on web medical forums. Health informatics Journals  https://doi.org/10.1177/1460458215576229 https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=4653& context=libphilprac. Accessed 22nd October, 2018

Minishi - Majanja, M. 2004. Information and communication technologies in library and information science education in South Africa. Mousaion 22(2): 150 - 171.

Olasina, G. (2014). Predictors of legislators ICT acceptance and use in the performance of legislative functions at the Nigerian National Assembly PhD thesis submitted to the Department of the Information Studies in the University of Kwazulu-Natal Pirtermariburg,

Owolabi, K A. (2016) Access and use of clinical informatics among medical doctors in Nigeria and South Africa. PhD. thesis University of Zululand South Africa.

Owolabi, K. A and Attama, R.O (2010) Revitalizing Polytechnic education through ICT. Owena journal of library science 10(3). 23-32.

Taylor, S. and Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing,* 12 (1), 137-156.Retrieved from www.sciencedirect.com/science/article/pii/01678116940001 Accessed on 6 July, 2015.

Thompson, R.L. Higgin, C. A. and Howell, J. M. (1991). Personal computing toward a conceptual model of utilization. *MIS Quarterly*, 15 (1), 144-176.Retrieved fromhttps://www.jstor.org/stable/24944

Venkatesh, V. and Davis, F. D. (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies, *Management Science*. 46 (2), 186-204.Retrieved from pubsonline.informs.org/doi/abs/10.1287/mnsc.46.2.186.1192 12 Accessed on June, 2018.

Venkatesh, V. Morris, G. Michael, G. Davis, G. and Davis, F. D. (2003) .User acceptance of information technology: toward a Unified View. *MIS Quarterly.* (27), 425-478 Retrieved from https://www.jstor.org/stable/30036540 Accessed on 16 April, 2015.

Venter, P., Van Rensburg, M. J., & Davis, A. (2012). Drivers of learning management system use in a South African open and distance learning institution. Australasian Journal of Educational

Technology, 28(2), 183-198. Retrieved from:

http://www.ascilite.org.au/ajet/ajet28/venter.html 183159