



**SCIENCE TEACHERS
ASSOCIATION OF NIGERIA**
OYO STATE BRANCH

INNOVATIONS IN STEM EDUCATION

STAN



**PROCEEDINGS OF STAN CONFERENCE
(OYO STATE) 2019**

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STUDENT-FACTOR AS DETERMINANTS OF STUDENT PASTORS' ATTITUDE, PERCEPTION AND MOTIVATION TO USE ICTS FOR LEARNING OF LANGUAGES IN BAPTIST COLLEGE OF THEOLOGY, LAGOS

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Abstract

This study examined student-pastors' attitude, perception and motivation to use Information and Communication Technology (ICT) for the teaching and learning of languages in theological institutions. Forty-six (46) 100, 200, 300 and 400 levels student-pastors selected by purposive random sampling from the Theology, Religious Education, and Church Music Departments of Baptist College of Theology, Lagos participated in the study. Teaching and Learning Languages Questionnaires (TLLQ) was used to collect data in order to test four null hypotheses at $p < .05$ level of significance. Data collected were analysed using descriptive statistics, analysis of variance (ANOVA) and t-test. Findings indicated that there is no significant difference in the student pastors' perception, motivation and attitude to the use of instructional software in learning languages across subject areas, gender, age and levels of study

Keywords: *ICT; Technology Integration; Virtual Learning Environments, E-Assessment Tools*

Introduction

Information and Communication Technology (ICT) includes computers, the Internet, and electronic delivery systems such as radio, television and projectors among others, which are widely used in today's education field. Lautenbach (2010) indicated that school is an important environment in which students participate in a wide range of computer activities, while the home serves as a complementary site for regular engagement in a narrower set of computer activities.

Increasingly, ICT is being applied successfully in instruction, learning, and assessment.

ICT is considered a powerful tool for educational change and reform. A number of previous studies have shown that an appropriate use of ICT can raise educational quality and connect learning to real-life situations (Vrasidas and Glass, 2005; Weert and Tatnall, 2005). As Weert and Tatnall (2005) have pointed out, learning is an ongoing lifelong activity where learners change their expectations by seeking knowledge, which departs from traditional approaches. As time goes by, they will have to expect and be willing to seek out new sources of knowledge. Skills in using ICT will be an indispensable prerequisite for these learners.

ICT tends to expand access to education. Through ICT, learning can occur any time and anywhere. Online course materials, for example, can be accessible 24 hours a day, seven days a week. Teleconferencing classrooms allow both learner and teacher to interact simultaneously with ease and convenience. Based on ICT, learning and teaching no longer depend exclusively on printed materials. Multiple resources are abundant on the Internet, and knowledge can be acquired through video clips, audio sounds, visual presentation and so on. Current research has indicated that ICT assists in transforming a teaching environment into a learner-centered one (Sánchez and Alemán, 2011). Since learners are actively involved in the learning processes in ICT classrooms, they are authorized by the teacher to make decisions, plans, and so forth (Lu, Hou and Huang, 2010). ICT therefore provides both learners and instructors with more educational affordances and possibilities in various disciplines including languages.

According to Sharma and Barret (2007), there are several reasons for using technology in language teaching. Technology can be motivating, offers the possibility to work autonomously or interact and collaborate with others, provides instant feedback on language performance in various tasks and exercises, as well as serving as an extension of the classroom and can be time saving. Technology can promote language learning with fresh authentic and motivating materials directly usable from the Internet. It is equally useful in the practice of blended learning, which they define as a language course that combines a face-to-face classroom component with an appropriate use of technology. In this case, Sharma and Barret (2007) suggest that positive learning outcomes are most apparent when clear roles are assigned to the teacher and to the technology.

ICT has been used in almost all fields of life, including in education. In education, computer technology has become so essential that the government put ICT as one of the curriculum in Indonesia's education. The utilization of ICT in education has recently started to appeal the potential and significant progress in language learning. It has become a major issue in education world and has been used from preschool through to university that could facilitate students and teacher in teaching and learning process. ICT has been publicized as potentially powerful enabling tools for educational change and reform. The computers play significant role in the learning process especially in learning language.

Hartoyo (2008) stated in his book, a computer is a tool and medium that facilitates people in learning a language, although the effectiveness of learning depends totally on the users. The technology in this era has been grown up not only from the quality but also the efficiency. They are moving fast without any limit from every product. The need of technological innovation has brought the communication revolution and rapid development of technological application in teaching and learning. This technology made contribution on improving language communication in Indonesia. Every school has used the ICT to facilitate the teacher to teach the students in the classroom. Many kinds of application that they use in the classroom improved and enhanced the better lesson.

Hartoyo (2008) also asserts that English language teaching has been shaped by the search for the 'one best method' of teaching the language. Regardless of whether the focus of instruction has been reading, the grammatical rules and vocabulary of the target language (e.g. Grammar Translation Method), speaking (how to communicate the target language such as Direct Method, Audio-Lingual Method, The Silent Way, Suggestopedia, Community Language, Communicative Approach), or other issues such as The Total Physical Response Method, the attempts of the teaching profession have been shaped by a desire to find 'a' better way of teaching than the existing method. The latest method that is developing is Computer Assisted Language Learning (CALL).

Some experts and practitioners of education learning language in CALL, strongly supports the utilization of ICT in language learning to improve efficiency and effectiveness of learning that can improve the quality of understanding and mastery of the language studied. In other words, the integration of ICT in the field of language learning is

inevitable known that the ICT and language learning are two aspects which support each other like two sides of the coin inseparable (Hartoyo, 2010). Fortunately, the use of CALL has increased noticeably by English teachers.

CALL as a tool is flexible, rich and interactive. It is flexible in the term of time and place. It has also assumed that more than other media can encourage students in learning language. This is due to the computer's ability to present material is more diverse ways than either book or video does. In addition, CALL is able to generate interaction and improve communicative competence, including providing authentic material to the class or self – learning. The method focuses in computer utilization to enhance language learning.

ICT Tools Classification

ICT tools have been reported to yield positive results in ELT classrooms. In fact, judicious use of ICT tools to teach English boosts learning in terms of attitudes, autonomy and authenticity. In this section, we will list several ICT tools, classified according to their functions. To this effect, we will use Erben et al., (2009) classification which focuses on the functions of the different ICT tools.

E-creation Tools

Those tools enable English Language learners to be creative. They involve playing with and using language to create, explore, and discover while producing content and learning performances that can be measured. Examples of these tools include web publishing, presentations software, exercise creating tools, podcasting, camera, moviemakers, and audio makers.

E-communication Tools

Software that promote communication among students and teachers may be divided into two kinds of tools. First, there are those types of software that allow for in real time interaction (i.e. synchronous) such as telephone conversations, a board meeting, voice conferencing, and instant messaging. The second type of software includes those that occur with a time delay (i.e. asynchronous) such as email, text messages transmitted over cell phones, and discussion boards.

They can be accessed by following these link:
<https://webwhiteboard.com/> ; <https://penzu.com> ;
<https://www.wikispaces.com/content/classroom> and
<https://www.blogger.com/> .

Similarly, E-books have many functionalities. Learners can use them to develop their reading skill. For instance, e-books have added audio, interactive tasks and built-in dictionaries. Another advantage of this tool is that learners can access e-books on several devices such as tablets, mobile phones, and laptops

Listening/Speaking-facilitative e-tools

The listening skill can be developed through ICT tools such as Video and audio files; Podcasts (syndicated audio files) and vodcasts (syndicated video files) as well as Audio Video sharing libraries like YouTube.

E-assessment Tools

Erben et al., (2009) list three basic performance types of assessment, namely, performances, portfolios, and projects. The main difference between these types of assessment and standardized traditional tests lies in the fact that with the alternative assessment tools, the learner “produces evidence of accomplishment of curricula objectives”. This evidence is put in the form of a performance, project, or portfolio and can be “archived and used at a later date with other pieces of learning evidence as a compilation of proof to demonstrate achievement.” Erben et al., (2009)

Virtual Learning Environments

Virtual Learning Environments (VLE) are Web-based platforms that allow teachers and learners to manage and organize their work electronically. Some of the benefits of these online spaces are as follows:

- i. Both parents and learners can access these spaces to assess progress.
- ii. All participants may have their say on the discussion forums or conferencing sections
- iii. VLEs reduce the social distance between all participants.

Hypotheses

The following null hypotheses were tested in this study at $p < 0.05$ level of significance:

1. There is no significance difference between subject areas and perception on the use of Instructional Software.
2. There is no significant relationship between gender and student-pastors' motivation to the use of Instructional Software.
3. There is no significance difference between student-pastors' age and attitude to the use of Instructional Software.
4. There is no significance relationship between student-pastors' levels of study and attitude to the use of Instructional Software.

Methodology

This study employed the descriptive research type to examine student-pastors' attitude, perception and motivation in using ICT for the teaching and learning of languages in the Baptist College of Theology, Lagos. Data collected were analysed using descriptive statistics, analysis of variance (ANOVA) and t-test.

A total of forty-six (46) student-pastors in 100, 200, 300 and 400 levels selected using purposive random sampling participated in the study. The distribution of the sample across the Departments is contained in Table 1.

Table 1: Sample Distribution across Departments

Subject Areas	Frequency	%
Theology	34	73.91
Religious Education	07	15.22
Church Music	05	11.87
Total	46	100

Table 1 reveals that 74% of the respondents are in the Theology class, 15% of the respondents specialize in Religious Education, while 11% specialize in Church Music.

Table 2 presents the demographic information about student-pastors involved in the study:

TABLE 2: Gender distribution of the Student-pastors

Variables	Frequency	%
GENDER		
Male Students	33	71
Female Students	13	29
Total	46	100

Table 2 reveals that 29% of the participants in the study were females and 71% were male student-pastors.

The main instrument used is the Teaching and Learning Languages Questionnaires (TLLQ), The instrument has two sections, Section A which is the demographic data section that contains information about student-pastors' age, level of study, subject area and gender. Section B that contained 26 statements based on the four hypotheses raised in the study.

Results

H₀1 – There is no significance difference between Subject Areas and Students-Pastors' perception on the use of Instructional Software.

Table 3: Analysis of Variance (ANOVA) of the difference between Subject Areas and Student-Pastors' Perception on the use of Instructional Software.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.842	2	3.921	1.028	.366
Within Groups	164.071	43	3.816		
Total	171.913	45			

The table above showed a significant value of 0.366 (i.e., $p=.366$), which is more than 0.05 and, therefore, there is no significant difference between subject Areas and student-Teachers' perception on the use of Instructional Software. This means the hypothesis is not rejected.

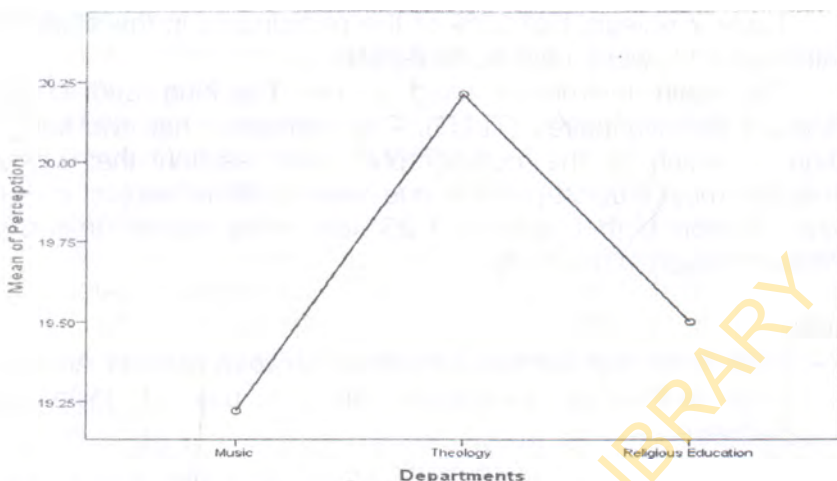


Fig. 1: The Means Plot

H₀₂ - There is no significant correlation between gender and student-pastors' motivation to the use of Instructional Software.

Table 4T-Test of the difference between gender and student-pastors' motivation to the use of Instructional Software.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	T	Df
Motivation	Equal variances assumed	2.764	.104	3.712	44
	Equal variances not assumed			2.560	5.559

From the table above, it can be seen that the significance value is 0.104 (i.e., $p=.104$), which is more than 0.05 and, therefore, there is no significant correlation between gender and student-pastors' motivation to the use of Instructional Software. This means the hypothesis is not rejected.

Ho3 - There is no significance difference between student-pastors' age and attitude to the use of Instructional Software.

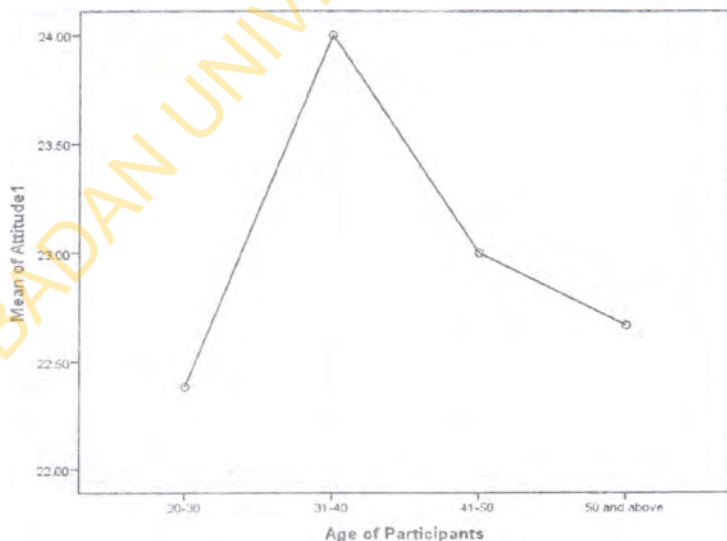
Table 5 Analysis of Variance (ANOVA) of the difference between Student-Pastors' age and attitude to the use of Instructional Software.

ANOVA

Attitude 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.582	3	7.861	1.879	.148
Within Groups	175.744	42	4.184		
Total	199.326	45			

From the table it can be seen that the significance value is 0.148 (i.e., $p=.148$), which is more than 0.05 and, therefore, there is no significant difference between Student-Pastors' age and attitude to the use of Instructional Software. This means the hypothesis is not rejected.



The Means Plot

Ho4: There is no significance relationship between student-pastors' levels of study and attitude to the use of Instructional Software.

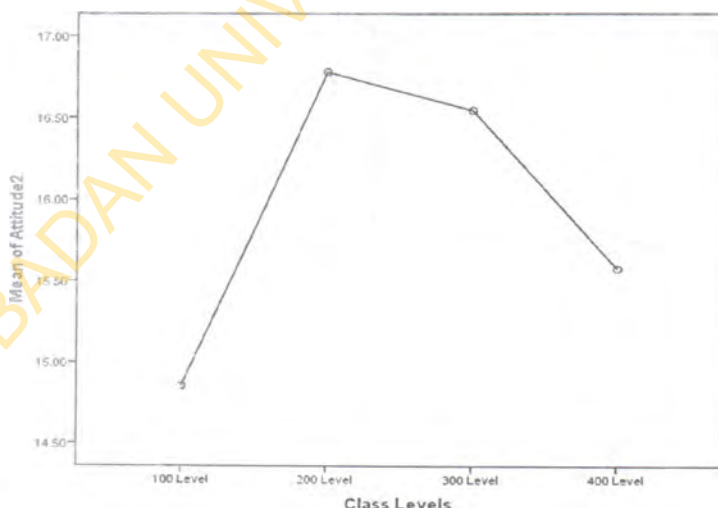
Table 6: Analysis of Variance (ANOVA) of the relationship between Student-Pastors' Levels of study and attitude to the use of Instructional Software.

ANOVA

Attitude 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27.695	3	9.232	2.167	.106
Within Groups	178.914	42	4.260		
Total	206.609	45			

The table above showed a significant value of 0.106 (i.e., $p=.106$), which is more than 0.05 and, therefore, there is no significant relationship between Student-Pastors' Levels of study and attitude to the use of Instructional Software. This means the hypothesis is not rejected.



Means Plot

Discussion of Findings

Hypothesis One

There is no significant difference between Subject Areas and Student-Pastors' perception on the use of Instructional Software. Results in Table 3 showed that there is no significant difference between subject areas and student-pastors' perception on the use of instructional software. The hypothesis was therefore not rejected. This implies that there is no significant difference in the student-pastors' perception on the use of instructional software among the three different subject areas that include Theology, Church Music, and Religious Education.

The means plot also showed the means of perception among the three subject areas, it can be noted that the means plot for theology though not significant, is higher compared with the other two, this can be explained that both Church Music and Religious Education students also offered more theology courses. These findings are in line with Adebileje (2002) that technology has been very effective in teaching foreign languages as language is an essential instrument of instruction regardless of different subject areas.

Hypothesis Two:

There is no significant correlation between gender and student-pastors' motivation to the use of Instructional Software. The results in Table 4 have revealed that there is no significant correlation between gender and student-pastors' motivation in the use of instructional software. The means of perception as showed in the Means Plot indicated that there is no significant correlation between both male and female student-pastors and their motivation to the use of instructional software. One possible explanation for this is that the participants were not statistically significant to warrant not rejection of the null hypothesis. Result has revealed that the use of instructional software is an effective treatment that breaks gender barrier in enhancing students' performance in language learning.

The finding is not statistically significant on gender difference in the treatment gain of male and female students. The finding above could not find support with earlier findings of Fakolade, Asamaigo and Oyundoyin (2011) who found that gender differences exist in students' performance in language studies. The result of no gender effect on language performance was observed in this study because language learning is neither muscular nor feminine in nature. The result also

corroborates the studies of Adesoji (1999) and that of Aremu (1998) while it does not agree with the studies of Oyesoji (1999) and Bacon (1992).

Hypothesis Three:

There is no significance difference between student-pastors' age and attitude to the use of Instructional Software. The result in Table 5 shows that there is no significant difference between student-pastors' age and attitude to the use of instructional software. Although the age of the participants ranges from 20 to above 50 years, the result have shown that there is no significant difference between the different age ranges attitude to the use of instructional software. The study revealed that the relative contribution of age is not significant.

This finds support in Animashaun and Adeleke (2011) who implied that age in this context does not affect learning outcome of students. It also supports the findings of Liang (2011) which revealed that an age heterogeneous classroom may provide a venue for younger students to learn closely from older students and for older students to gain from helping and studying with younger peers. This is also in contrast with the assertion of Kelebogile(2015) that present day students are Generation Y, commonly known as the millennials. They were born around 1990 – 2001. These millennials are in the process of shaping the contemporary and the future world. Kerr Lassen of the City Press newspaper (1 February 2015) recently alluded to the fact that “while the millennials have often been considered as narcissistic or lazy, they are also known to be tech-savvy, liberal and with an insatiable desire to “give back” to the world despite a poor economy.” They change with technology rapidly, while their teachers still lag behind.

Hypothesis Four:

There is no significance relationship between student-pastors' levels of study and attitude to the use of Instructional Software. The result in Table 6 shows that there is no significant difference between Student-Pastors' Levels of study and attitude to the use of Instructional Software. The research population included students from 100-400 Levels cutting across theology, religious Education, and church music departments. The result revealed that levels of study did not contribute significantly to student-pastors' attitude towards the use of Instructional Software in language study.

Conclusion

From the results of the study, it was realized that the use of instructional software is very effective in the teaching and learning of languages. Gender, Age, Subject Areas, and Class Levels have no significant relationship with student-pastors' motivation, perception and attitude to the use of instructional software.

Recommendations

On the basis of the conclusion above, the following recommendations are made:

- i. There is need to organize periodic seminars and workshops on the use of information and communication technology in augmenting language teaching.
- ii. Teachers should try as much as possible to adopt the use of instructional software in their teaching of languages.
- iii. Teachers should be educated and encouraged to improvise materials where the materials needed are not available or sufficient.
- iv. Student-pastors should be encouraged to get personal computers or laptops to enable them utilize the functionalities of these mobile devices for language learning.

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