

**EFFECTS OF ICT ENHANCEMENTS ON STUDENTS' ACADEMIC ACHIEVEMENT IN HISTORY AMONG SENIOR SECONDARY SCHOOL STUDENTS IN BAYELSA STATE, NIGERIA**

**AMATARI, VERONICA O; KEBBI, JANET A. & ABRAKASA, ROLAND**  
DEPARTMENT OF EDUCATIONAL FOUNDATIONS, FACULTY OF  
EDUCATION  
NIGER DELTA UNIVERSITY, WILBERFORCE ISLAND, BAYELSA STATE,  
NIGERIA

**Abstract**

To justify the integration of ICT enhancements in the teaching/learning process of the subject matter of the re-introduced History in the Senior Secondary School Curriculum, a study on the effect of ICT enhancements on senior secondary school students' academic achievement in History in Nembe Local government area in Bayelsa state was carried out. The quasi-experimental research design was adopted. A sample of 156 students of History stratified into the control and treatment groups was selected for the study. Multi-stage random sampling technique was adopted. Two instruments; History Achievement Test (HAT) and History Treatment Package (HTP) were developed and validated by the researchers. A reliability coefficient of 0.98 was attained for HAT using Kuder Richardson 20. Data collected were analyzed using independent and paired t-test. A major finding is that there is a large effect size of 0.98 on students' achievement in History after the exposure to ICT driven teaching/learning process. Based on finding, it was recommended that budgetary allocation to the education sector should significantly be increased because basically acquisition of technologies is capital intensive.

**Key words:** Information Communication Technology. History. Academic achievement. ICT enhancements.

**Introduction**

A man who lacks history is like a man without memory. A country without a sense of History is a soulless nation. If an individual does not know where he's coming from, he would not know where he's headed for. Every nation in the world today holds her history in high esteem. A country without a sense of History is liken to a soulless nation. History is the bedrock of education and without which a country does not and cannot grow. Whether from the family to the state, history has been the great teacher of civilization. Children can hardly learn without History. States cannot make policies without falling back on history. History as a discipline involves the use of various types of information or data gathered from various sources for explaining, interpreting and analyzing events and developments in human society and the use of the knowledge generated for educating people about their past and present. A knowledge that is necessary for human progress and general development. Historical knowledge facilitates stocktaking to enable human society to learn from the past, to avoid the mistakes of the past and to learn from the past experiences

of others in planning for the future.

Therefore, when in 2009, during late President Umaru Musa Yar'Adua administration, History as an academic discipline in the curriculum offered to secondary school students was expunged, there was chain of reactions of outcry, anxiety, dread for the future and statements of opposition among stakeholders across the nation. Thirteen years after, in 2022, History was restored as a discipline in the curriculum. Reasons given by the then Yar'Adua administration included the dwindling students' interest in History, paucity of jobs for History graduates, the dearth of teachers of the subject amidst others. Ikemeka (2022) reported that unspoken reason was that the ruling class decided to jettison the subject to conceal certain elements of the nation's history considered ugly for young Nigerians. These included the occurrences that led to the civil war, war itself and its aftermath.

The threat to national development anticipated by stakeholders in 2009 when the young Nigerians were deprived from knowing where it all started - the history of nation hood; became a reality that Nigeria is struggling with within a span of 10 years. Insecurity, banditry, religious bigotry, and herdsmen brutality have taken the nation hostage. It became compulsory to revert the previous policy and in 2022, History was restored in the curriculum of schools. The Federal government has restored History as a teaching subject in the senior secondary schools following the observation that the removal has undermined the peace and cohesion as well as triggered mutual distrust among the many ethnic nationalities in the country thereby hindering national development (Ikemeka, 2022).

The former Minister of Education, Adamu. Adamu said that the removal of History was a monumental mistake with serious consequences for the country. He explained that the loss created by the absence of this subject had led to a fall of moral values, erosion of civic values and disconnect from the past. According to Him, more worrisome was the neglect of the teaching of this subject at basic and post basic levels of education which had invariably eroded the knowledge of the evolution of Nigeria as a country. National cohesion is being threatened with the country retreating into primordial sentiments because of lack of knowledge about the evolution of Nigeria. (Ikemeka, 2022).

The reintroduction of History is therefore a welcome development. It is an established fact that History as a subject of study is an intellectual means of political, social and economic development. It is viable, not just for mere intellectual rebirth and cultural revival but that it would enable the country's educational system to enrich the minds of young Nigerians. History is premised on the need for proper documentation for Nigerians from all strata whether pleasant or not. History has values in developing the minds of the people. Worthwhile is that there is no discipline without its own history.

In the year 2019, the official policy of reintroduction of History as a subject was issued but active kick-off was in 2022, in which the training of History teachers commenced; creating not only a room for trained teachers to teach history in schools but also the probability of transforming the pedagogical approach with the use of I.C.T enhancements

that is becoming a globally acceptable standard in the 21<sup>st</sup> century. This is likely to void the feeble reasons given for the exclusion of History for the last 13 years in the curriculum offered to students.

Stakeholders had suggested that for History to be impactful there is need to make it a stand-alone subject to be taught in class and be written in both internal and external examinations in the country. However, in this study; the researchers are advocating for the integration of ICT devices in the teaching/learning process of History that could impact positively on students' achievement in the subject and of more importance, sustain their keen interest in the history of nationhood and build up their corresponding careers in History. In 21<sup>st</sup> century, career opportunities are opened to graduates of History. These include opportunities in the profession of teaching and lecturing; they could also pursue careers in journalism, politics, laws, diplomacy and foreign services.

Enhancing the teaching/learning process of History for better impact is observed from the perspective of integrating Information Communication Technology (ICT) in the content delivery to students. This does not purport that traditional methods of content delivery should be expunged but that blended learning is justifiable. Blended learning is a hybrid learning environment that combines face-to-face education with access to online education. Hybrid and blended learning are used interchangeably. Graham (2006) defined blended as the system that combines face-to-face instructions with computer-mediated instruction. While Garrisons and Kanuka (2004) defined blended learning as the thoughtful integration of classroom face-to-face learning experiences with online learning experiences. Allen and Seaman (2010) defined a blended learning course as a course that blends online and face-to-face delivery. Blended learning is also used to describe blends, such as combining different instructional methods, pedagogical approaches or technologies; although these blends are not aligned with the most influential blended learning definitions (Hrastinski, 2019).

History relevance and sustenance in this time and age require application, adoption and adaptation of adequate ICT gadgets such as colorful moving images, multimedia computer software that combine text and sound, television and video tapes, which can be used to provide challenging and authentic curriculum that will not only motivate the student in the learning process but induce their active participation and engagement in the immediate experience of actual learning. Information Communication Technology in history suggests the engagement in teaching, the adaption of ICT gadgets which allows for live recording of significant moments, events and the growth of proven historical facts. The collection, analysis and interpretation of data from history which take a test of time enables one to know the past through the eye of the present. ICT in history allows the teachers and students to access and abreast of credible, up to date and enriched source of historical data through visiting websites on the internet. Students' interest in the subject could be harnessed with the integration of ICT and patronage will likely increase.

In the training of History teachers, focus on technology-enabled teaching should be integrated into the process. This will facilitate a blended classroom-based learning. This is because the expectation that teachers interacting with blended learning will acclimate to

pedagogies reasonable for not only collaborative learning but for learning process that prepares for interactive productivity useful in the 21<sup>st</sup> century culture that is characterized by large diversification. This could likely attract the interest of the teeming students to the study of History.

The online is enriched with dynamic and interactive media materials that create ample opportunities for learners and teachers for extensive curriculum exploration before, during and after course experience. Therefore, dynamic between the learner, the teacher, and the technology is underscored. Mathews (2011) reported that History has been condemned as a low-level intellectual activity that encourages mere regurgitation of names, dates, places and events. The misconception is bound to change with the use of ICT to enhance the teaching and learning of History in the system of Education.

The study is hereby aimed at justifying the integration of ICT enhancements in the newly re-introduced History in the curriculum offer to secondary school students. In doing this, an empirical study was carried out to investigate the effect of ICT on students' academic achievement in History among Senior Secondary Students in Nembe Local Government Area in Bayelsa State, Nigeria. The study was guided by three hypotheses. They are:

H<sub>0</sub>1: There is no significant difference between the pretest and post test scores in History achievement of the Treatment group.

H<sub>0</sub>2: There is no significant difference in the post test scores between the control and treatment groups based on gender

H<sub>0</sub>3: There is no significant effect of ICT driven lessons on students' academic achievement in History.

### **Methodology**

The study adopted the non-randomized pretest and protest control group; a quasi-experimental design. A sample of 156 SS2 students offering history was selected for the study. Multistage sampling method was used for the study. Four schools were randomly selected from the six secondary schools in Nembe local government area. Two schools came from each of the two divisions (Ogbolobabiri and Bassambiri) of Nembe. All SS 2 students offering History in each school made up the sample. The two schools selected from each division, one was selected as the control group and the other as the experimental group.

Two instruments for data collection in the study were developed by the researchers. These are: History Achievement Test (HAT) for pretest and posttest and History Treatment Package (HTP). The HAT is a 40- item multiple-choice test with four options of A to D. Kuder Richard formula 20 was used to establish the internal consistency of the instrument. The reliability coefficient is 0.9, the content validity of HAT was established using the scheme of work for History to develop the items across the first three levels of the cognitive domain namely; Knowledge, Comprehension and Application. The HTP served as the main content of the treatment group. The content of instrument was drawn from the government approved history scheme of work. The ICT assisted treatment group enhanced their learning with the internet, video clips and historical pictures while the control group was taught only with traditional methods. The teacher made use of laptop

computers and internet images to teach the students and administration of posttest was strictly observed. Data collected were analyzed with t-test statistical technique.

**Results**

**H<sub>0</sub>1:** There is no significant difference between the pretest and post test scores in History achievement of the Treatment group.

**Table 1: Paired t-test of Treatment Group**

Variables	mean diff.	SD	Standard Error	t	df	Sig	Cohen's d
Pretest- Posttest	4.907	5.669	.575	-8.524	96	0.01*	0.98

\*Significant @ P < 0.05 alpha level.

The paired t-test shown in Table 1 indicates a mean difference between pretest and post test scores of -4.907. The calculated effect size is 0.98. This is a large effect size. And scores in posttest after treatment is significantly different from scores in pretest, t = -8.524; df = 96, P < 0.05.

**H<sub>0</sub>2:** There is no significant difference in the post test scores between the control and treatment groups based on gender

**Table 2: Independent t-test by Gender**

Variables	N	Mean	SD	Std Error	t	Df	Sig
Female	91	25.285	4.629	.485	-1.198	154	.233 <sup>NS</sup>
Male	65	24.369	4.823	.598			

Not significant at P > 0.05 alpha level.

From Table 2, the post test scores of female students are not significantly different from the scores of the male students after exposition to ICT driven lessons. Therefore, the null hypothesis is accepted

**H<sub>0</sub>3:** There is no significant effect of ICT driven lessons on students' academic achievement in History.

**Table 3: Independent t-test by treatment**

Variables	N	Mean	SD	Std Error	t	Df	Sig
Control group	59	25.220	4.437	.577	1.175	154	.242 <sup>NS</sup>
Treatment group	97	24.711	4.892	.496			

NS: not significant, P > 0.05 alpha level

Finding from Table 3 shows that there is no significant effect of treatment on student's performance in History when viewed from the samples in the control and treatment groups

### **Discussion**

Finding from Table I shows that a significant difference in scores between the pretest and protest administered to the treatment group occurred. The posttest was administered after the students were exposed to learning experiences with the application of the internet, video clips and projector enhanced historical pictures. A better performance on their posttest indicates that technology driven lessons in history is impactful. Adamu et al (2022) study corroborated the finding of this study. In their study on the impact of internet use on Biology students' academic performance in Zaria, Kaduna state, their findings revealed that internet-based technologies have an impact on academic performance in Biology. Whereas, in their study Ravizza et al (2014) found that high rates of non-academic internet user were associated with lower test grades of students. Likewise, in a study by Talukaler et al (2015), it was found that there is no relationship between the use of ICT and the performance of the students but ICT addiction affects the performance of the students negatively.

Actually, the excitement and apt attention observed among the students in the treatment group during the teaching/learning process likely contributed to the positive impact on their performance. Another important observation is the arousal of interest in the students and their active participation during the lessons which probably contribute to their achievement motivation. Ishaq et al (2020) affirmed that the productive use of ICTs has had a substantial impact on the students.

Findings in table 2 reveal that the gender of students has no significant effect on the performance of students in History. There is no gender inclination in the performance in History with the integration of ICT. Adamu et al (2022) also found in their study that there were no substantial differences in online activity among Biology students in Secondary School students in Zaria based on gender. However, Hussain (2022) revealed that women's academic performance increased by the usage of ICT. His study underscored a correlation between ICT usage and academic success.

However, the motive behind this study is on the investigation of the effect of application of ICT enhancements on the academic achievement in History after exposure to online learning. The finding reveals no significant effect. The performances between the students in the control group and the treatment group are not significantly different, indicating that the treatment package utilized in the teaching/learning process was not impactful enough to make a difference. Though from the afore mentioned finding above, in the context of paired sample test, there is a significant effect of treatment (a large effect of 0.98) on students' performance measured using the yardstick of pre-test and post test scores.

Likely reasons for this conflicting result could be some of the challenges the researchers had to contend with during the time scheduled for administering the treatment package. In one of the schools selected as a treatment group, there was delay in the process of teaching due to crisis within the community where the school was located. Therefore, teaching and

assessment was halted for more than one week before it was completed behind schedule. Secondly, in one of the schools selected, though there are students offering History, no History teacher on ground in the school to teach the subject. Thus, this study afforded the students to be taught by a trained History teacher for the first time. Anyway, the finding that revealed about 0.98 large effect size after treatment on students is worthwhile to justify the inclusion of ICT devices in the teaching /learning curriculum of the re-introduced History as an academic discipline in the educational system

### **Conclusion**

Revolutionizing the curriculum offered to the young generation to meet up with global standard of development is on high demand. The re-introduction of History in Secondary School curriculum could be the needed opportunity to integrate current and global acceptable standard of educating the young learners in the 21<sup>st</sup> century. This study justified the advocacy of integrating ICT modes in the teaching and learning of History in secondary schools. A finding in this study that indicated an improvement on students' achievement in History based on the adoption of ICT enhancements in the teaching /learning classroom setting align with the viewpoint of the researchers.

### **Recommendations**

- It is a fact that technology-driven learning pedagogy is capital intensive. This is one out of many reasons why the educational sector should be well funded. Both the Federal and State governments should be able to adequately fund the system by increasing its budgetary allocation to make a tremendous impact
- The consistent training of teachers in the acquisition of technological driven skills is as important as the acquisition of technologies. Therefore, the need for continuous training of teachers with technologically driven pedagogical skills.
- Adequate electricity power supply is needed for proper utilization, maintenance and sustenance of most of the technological based equipment.

### **References**

- Adamu, T.A., Alatiatayo, B.M., & Adamu, T.I. (2022). Impact of internet use on Biology students' academic performance in Zaria, Kaduna state. *African Journal of Humanities & Contemporary Education Research*, 3(2), 120-128.
- Allen, I.E., & Seaman, J. (2010). Class differences: Online education in the United States. *Sloan Consortium* <https://files.eric.ed.gov/fulltext/ED529952.pdf>.
- Garrison, D.R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7(2), 95-105. <https://doi.org/10.1016/j.iheduc.2004.02.001>.
- Graham, C.R. (2006). Blended learning systems: Definition, current trends and future directions. In C.J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp.3-21). Pfeiffer Publishing.
- Hrastinski, S. (2019). What do we mean by blended learning? *Tech Trends*, 6(3), 564-569. <https://doi.org/10.1007/s11528-019-00374-5>.
- Hussain, T. (2022). Impact of ICT adoption on academic performance of students: Evidence from the Universities of Bahochistan. *Mazedan Computer Engineering Transactions*, 3(I), 20-24.

- Ikemeka, C. (2022, Dec 10). Return to history in schools: How knowledge of the past can shape the future. *The Guardian*. [www.theguardian.com](http://www.theguardian.com).
- Ishag, K., Zin, N.A., Rosdi, F., & Abid, A. (2020). Impact of ICT on students' academic performance in public private sector universities of Pakistan. *International Journal of Innovative Technology and Exploring Engineering*, 9 (3), 2278-3075. DOI: 10.35940/ijitee.c8093.019320.
- Matthew, G. (2011). History-A worthwhile academic discipline. *History in Action*, 2, (2), 1-4.
- Ravizza, S.M., Hambric, Z., & Fenn, K. M. (2014). Non-academic internet use in the classroom is negatively related to classroom learning regardless of intellectual ability. *Computers & Education*, 78 (1), 109 - 114. DOI:10.1016/j.compedu.2014.05.007
- Talukder, M.S., Alam, J., & Apu, A.S. (2015). The impact of ICT on students' performance: A case study on undergraduate university students. *Manarat International University Studies*, 4(1), 137-147.