DIGITIZING WRITING AS A DEVELOPMENTAL CONTINUUM TO PROFESSIONALIZATION: THE NIGERIAN EXPERIENCE

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Abstract— **The digital age has affected our everyday life in general and education in particular. Generally speaking, computer-mediated communication (CMC) has altered the way we write, the genres we use, information transmission, the teaching and learning process The study adopted the survey research design using questionnaires as instruments of data collection. It assessed the level of availability of computer in tertiary institutions in Anambra State of Nigeria, it's extent of application by English language lecturers, strategies for improving computer application in second language writing, the motivational capacities of different aspects of computer-assisted language learning (CALL) and the factors that militate against computer-assisted English language writing. There was a 100% availability of computers in all the sampled tertiary institutions, a low rate of application by second language lecturers—Tansian University (5%), Anambra State University (20%), Nnamdi Azikiwe University (16.61%), College of Education, Umunze (10%) and federal Polytechnic, Oko (15%). Majority of the study participants (Tansian University 95%, Anambra State University 90%, Nnamdi Azikiwe University 88.89%, College of Education 80%, Federal Polytechnic 90%) opted for language laboratory as a better strategy for improving computer application. It also showed that majority of the respondents were motivated by word processing—Tansian University-75%, Anambra State University—85%, Nnamdi Azikiwe University---88.89%, College of Education, Umunze---80% and federal polytechnic, Oko---90%. It recommended, inter alia, that tertiary institutions in Anambra state and Nigeria should procure more computer sets for the teaching and learning of English language writing.**

Index Terms: **Computer-Assisted Language Learning (CALL), Digitization, English Writing, Information and Communication Technology (ICT).**

I. INTRODUCTION

Computers have been playing an important role for educational use, specifically in second and foreign language education. Teachers and parents understand the importance of technology in language education and love to use computers to enlighten children because today's computer banks are filled with lots of knowledge. Numerous English as foreign language (EFL) research studies found that the integration of technology improved learners' academic performance, promoted their motivation, and enhanced their language learning (Blake; 2000, Cheng; 2003, Egbert; 2002; Skinner & Austin, 1999).

Computer-Assisted Language Learning (CALL) is used to describe any kind of language learning activity that makes use of computers. Computers have been used for language teaching since the 1960's. In language teaching, the use of computers started since thirty years ago. Computer Assisted Language Learning or known as CALL was introduced since 1960s. When integrated appropriately, CALL technologies can support experiential learning and practice in a variety of modes, provide effective feedback to learners, enable pair and group work, promote exploratory and global learning, enhance student achievement, provide access to authentic materials, facilitate greater interaction, individualize instruction, allow independence from a single source of information, and motivate learners (Lee, 2000).

Writing has always been dependent on technology. According to Bolter (1982),

writing in a very literal sense is technology…without the crayon or the stylus or the laptop, writing simply is not possible. From using clay tablets and animal skins via the medieval manuscript and the ancient papyrus roll, to the mechanization of writing with the printing press and the current digitization, writers have always had to handle physical devices and the applying these to some substrate. The outcome of the writing process has always relied on the skillful combination of technical/manual skill and intellectual/aesthetic aptitude.

Writing is an immensely important and equally complex and sophisticated human skill. However, the role and impact of the different technologies employed in the writing process is rarely addresses. This study is based on the rationale that computer can be ultimately employed in the teaching and learning process of English writing.

A. *Statement of the Problem*

The call for use of computers in tertiary education is to infuse and inject efficiency and effectiveness especially in second language writing. Given the technological advancement of Nigeria and awareness in the use of computer to enhance teaching and learning generally,

many tertiary institutions procured computers for use in teaching but failed to utilize it in English language teaching especially in teaching and learning of second language writing. Again, second language learners use technological tools such as computer, e-mail facilities, handsets etc but they have failed to realize that such technological tools could enhance the writing process.

More so, their availability and extent of application by lecturers in teaching English language writing, strategies for improving computer application in professionalizing second language writing, the motivational capacities of different aspects of computer-assisted language learning (CALL) and the factors that militate against computer-assisted English language writing have not been empirically determined. This study therefore, seeks to quantifiably fill this gap.

B. Purpose of study:

The specific objectives of the study are;

1. To ascertain the level of availability of computer for teaching and learning English language writing in the tertiary institutions.

2. To ascertain the extent of application of computer by lecturers in teaching English language writing.

3. To determine strategies for improving computer application in professionalizing second language writing.

4. To determine the motivational capacities of different aspects of computer-assisted language learning (CALL) and writing.

5. To ascertain the factors that militate against computer-assisted English language writing.

C. Research Questions

1. What is the level of availability of computer for learning English language writing in the universities?
2. What is the extent of application of computer by university lecturers in teaching English language writing?
3. What are the strategies for improving computer application in professionalizing second language writing?
4. What are the motivational capacities of different aspects of computer-
assisted language learning (CALL) and writing?
5. What are the factors that militate against computer-assisted English language writing?

D. Significance of the study:

1. The study will bring to the fore and proffer solutions to the challenges of computer-assisted language learning, teaching and writing.
2. It will guide policy makers in computer education

project monitoring and evaluation.
3. It will promote the knowledge of computer-assisted language learning and writing in tertiary institutions.
4. The study will highlight the need for an integrative approach in English language writing.
5. It will elucidate new motivational approaches in computer-assisted teaching, learning and writing.

E. Study Area:

The study was carried out in five tertiary institutions located in Anambra state of Nigeria. A total of 100 students and 100 lecturers of the following schools were used:

Tansian University, Umunya (private university)
Anambra State University, Uli (State university)
Nnamdi Azikiwe University, Awka (Federal University)
College of Education, Umunze (Federal)
Federal Polytechnic Oko (Federal)

F. ICT integration in the writing process,

Computers occupy unique place in every part of our lives. They are utilized in general education especially in language learning, hence the term 'Computer-Assisted Language Learning' (CALL), is now used to refer to the use of computers in the learning and teaching of English. According to Hanson-Smith (1997), Computers play a facilitating and complementary role for language teachers and students as it helps students progress at their own pace, improve their language skills, and study on their own without being dependent on anyone else. It equally gives them immediate feedback, corrections and error analysis. Other than these benefits, affective sides of CALL like learning style, motivation, personality and other factors have been under question with the use of computers in language classes (Genç & Aydın, 2010). Of these, the effects of motivation and writing via computers on language learning and teaching have been studied widely in the literature. The following are some of the benefits of using computer in writing:

❖ Student motivation increases towards writing.
❖ The students easily revise their writing.
❖ Errors are highlighted and the students correct such errors.
❖ It enhances readability of the text.
❖ Writing becomes more visual and pleasant with the aid of tools of word processing like addition of tables, drawing graphics, underlining and highlighting of essential points.

G. Writing problems of Igbo learners of English in Nigeria

Digitizing second language writing has motivational value in teaching and learning language and its four skills, particularly writing. Writing is a method of

representing language in visual or tactile form. The ability to write well is not a naturally acquired skill; it is usually learned as a set of practices in formal instructional settings. Writing involves using words to form sentences in paragraphs on a particular topic. It is quite disheartening that many Igbo writers of English are deficient in the area of English as second language writing. According to Catoh Christiana:

Research has shown that many students in the tertiary institutions, even after been taught the use of English and communication in General Studies of English still fail to show adequate competence in written English, at least up to the level that can be said to be mutually and internationally intelligible.

It must be stressed that such writing problems could be attributed to unplanned piece of writing. In this regard, we must point out that some students do not map out time to plan their write-ups. Consequently, such students write in a disorganized and incoherent manner. There is equally the issue of spelling, tense, concord problems, problem of transliteration, translations, problem of punctuation etc. These problems contribute greatly to most of the writing problems of Igbo writers of English. For instance, in the case of translation, some Igbo writers of English erroneously allow their mother tongue to intrude into English. They tend to produce and write expressions like: 'NEPA has taken the light' because its Igbo equivalent is 'E werele oku', I am coming (when the person is going away) for its standard English equivalent which is: 'I will soon be back'. Again, English has a difficult spelling system. This is a remarkable feature of the English language and this spelling system is difficult to master for second language learners. Whereas in many other languages like the Igbo Language, there is a one to one correspondence between spelling and pronunciation; there is a consistent set of rules that map spoken sounds to written forms, this is not the case in English.

In addition, many students (including Igbo writers of English) in Nigerian tertiary institutions continuously indulge in the act of speaking Pidgin English. They erroneously allow such to creep into their written language. The reason is that they spend so much time on that in such a way that it becomes internalized in their linguistic speech repertoire. Such problems are even evident during social networks. They problems are compounded by the fact that such people involved do not see such as a misnomer but a current trend. Efforts should be made to encourage the Nigerian writers of English to write vividly and succinctly. It is at this juncture that the digital role of computers and other technological tools cannot be overlooked. The reason is that digitalization of writing will draw the attention of writers to words and expressions that are not considered appropriate through underlining and other technological tools.

H. Analyzing impediments to functional ICT in ESL writing

Despite the benefits of computer use in language learning, CALL also has some limitations in practice. The reason is that computer is a man-made tool which is incapable of performing any action without a user (teacher). It cannot guarantee absolute achievement in the language class without conscientious efforts made by both the teacher and the learner. If the teacher is not qualified enough in using computers and cannot support his teaching with relevant materials, expecting that students be motivated through CALL is not more than a childish dream. Besides, the ways of motivating students through computers have dramatically changed due to new technologies emerging in the last two decades.

Another factor we have to take into consideration is that language learning consists of many social, psychological, and cognitive aspects which are not found in other types of learning. In view of this, we must that the motivating factors of a language learner who benefits from a computer might be different from those of other learners studying different subjects (Warschauer, 1996). Therefore, the teachers may have difficulty in adapting themselves to these technological innovations and finding a middle way between those aspects of learning.

In a developing country like Nigeria, computer use in English as a second language writing is challenged with the problem of material devices such as computer gadgets, computer laboratories, internet and e-mail facilities, wireless applications, digital library, digital classrooms, multimedia systems and the problem of multimedia courseware development among others (Global Information Technology Report, 2005). Other studies indicated that there is dearth of trained teachers for e-learning, lack of facilities, infrastructures and equipment.

I. Data Presentation and Analysis

J. Table 1: SEX DISTRIBUTION OF RESPONDENTS

SEX	NUMBER	% PARTICIPATION
MALES	40	20
FEMALES	160	80
TOTAL	200	100

& Participation: Males= 40/200 x 100 = 20
Females= 160/200 x 100 = 80

Table 2: SEX AND MEAN AGE DISTRIBUTION OF RESPONDENTS

SEX(NO.)	MEAN AGE (Years)
MALES(n=40)	30.20
FEMALES(n=160)	32.33
TOTAL(n=200)	(TOTAL MEAN)=31.27

TABLE 3: COMPUTER AVAILABILITY AND APPLICATION IN THE TERTIARY INSTITUTIONS

SERIAL NO.	TERTIARY INSTITUTIONS	% AVAILABILITY	% APPLICATION
1	TANSIAN UNIVERSITY	100	5
2	ANAMBRA STATE UNIVERSITY	100	20
3	NNAMDI AZIKIWE UNIVERSITY	100	16.61
4	COLLEGE OF EDUCATION, UMUNZE	100	10
5	FED. POLYTECHNIC, OKO	100	15

RESEARCH QUESTIONS 1: What is the level of availability of computer for learning English language writing in the universities?

RESEARCH QUESTIONS 2: What is the extent of application of computer by university lecturers in teaching English language writing?

TABLE 4: STRETEGIES FOR IMPROVING COMPUTER APPLICATION.

SERIAL NO.	TERTIARY INSTITUTIONS	STRATEGIES	
		LANGUAGE LAB.(%)	SOFTWARE(%)
1	TANSIAN UNIVERSITY	95	5
2	ANAMBRA STATE UNIVERSITY	90	10
3	NNAMDI AZIKIWE UNIVERSITY	80	20
4	COLLEGE OF EDUCATION, UMUNZE	85	15
5	FED. POLYTECHNIC, OKO	75	25

RESEARCH QUESTION 3: What are the strategies for improving computer application in professionalizing second language writing?

TABLE 5: MOTIVATIONAL CAPACITIES OF ASPECTS OF COMPUTER APPLICATION (%)

SERIAL NO.	TERTIARY INSTITUTIONS	ASPECTS OF COMPUTER APPLICATION (%)	
		WORD PROCESSING	INTERNET
1	TANSIAN UNIVERSITY	75	25
2	ANAMBRA STATE UNIVERSITY	85	15
3	NNAMDI AZIKIWE UNIVERSITY	88.89	11.11
4	COLLEGE OF EDUCATION, UMUNZE	80	20
5	FED. POLYTECHNIC, OKO	90	10

RESEARCH QUESTION 4: What are the motivational capacities of different aspects of computer- **a**ssisted language learning (CALL) and writing?

TABLE 6: MILITATING FACTORS AGAINST COMPUTER APPLICATION (%).

SERIAL NO.	TERTIARY INSTITUTIONS	MILITATING FACTORS (%)		
		INSUFFICIENCY	POWER SUPPLY	MAN POWER
1	TANSIAN UNIVERSITY	50	35	15
2	ANAMBRA STATE UNIVERSITY	60	20	20
3	NNAMDI AZIKIWE UNIVERSITY	60	30	10
4	COLLEGE OF EDUCATION, UMUNZE	70	20	10
5	FED. POLYTECHNIC, OKO	70	20	10

RESEARCH QUESTION 5: What are the factors that militate against computer-assisted English language writing?

Table 7

SUMMARY OF PERCENTAGE AVAILABILITY, APPLICATION, STRATEGIES, MOTIVATION AND MILITATING FACTORS

Tertiary Institutions	Computer Availability(%)	Application by Lecturers(%)	Strategies for Improving Computer Application(%)	Motivational capacities of Aspects of computer Application(%)	Militating Factors(%)
Tansian University, Umunya.	100	5	Lang. Lab—95 Software--5	Word---75 Internet--25	Insufficiency-50 Power supply-35 Manpower-15
Anambra State University, Uli..	100	20	Lang. Lab—90 Software--10	Word---85 Internet--15	Insufficiency-60 Power supply-20 Manpower-20
Nnamdi Azikiwe University, Awka..	100	16.61	Lang. Lab-80 Software--20	Word—88.89 Internet—22.23	Insufficiency-60 Power supply-30 Manpower-10
College of Education, Umunze.	100	10	Lang. Lab—85 Software--15	Word---80 Internet--20	Insufficiency-70 Power supply-20 Manpower-10
Federal Polytechnic, Oko	100	15	Lang. Lab—75 Software--25	Word—90 Internet--10	Insufficiency-70 Power supply-20Manpower 10

Discussion:

The study evaluated 'Digitizing Writing as a Developmental Continum to Professionalization: The Nigerian Experience'. It assessed the level of availability of computers for teaching and learning English language writing in the tertiary institutions, the extent of application of computer by lecturers in teaching English language writing, strategies for improving computer application in professionalizing second language writing, the motivational capacities of different aspects of computer-assisted language learning (CALL) and the factors that militate against computer-assisted English language writing.

Tables 1 and 2 show a demographic picture of the respondents by sex and age. Of the 200 participants investigated, 40(20%) were males while 160(80%) were females. This indicates a female dominance in the field of computer-assisted language learning (CALL).

The age distribution of respondents indicate that the mean age of male participants was 30.20 years while that of females was 32.33 years, while statistical analysis using Chi-square (X^2) showed that there is no statistically significant association between age and computer-assisted language teaching and learning ($X^2_{cal}=0,073,df=1,p>0.05$).

The result also showed that there is a statistically significant relationship between sex and computer-assisted language teaching and learning ($X^2_{cal}=36$, df=1, p<0.05). This corroborates the afore-mentioned opinion that sex is a determinant in 'CALL' and that more female involvement was recorded.

The study also investigated the differences between percentage application in the different institutions using Chi-square statistical analysis. The result showed a statistically significant difference in percentage application of computer in the tertiary institutions ($X^2_{cal}=10.4$, df=4, p<0.05).

On the overall, the study showed a 100% availability of computers in all the sampled tertiary institutions. Despite this, a low rate of application by the lecturers was recorded—Tansian University (5%), Anambra State University (20%), Nnamdi Azikiwe University (16.61%), College of Education, Umunze (10%) and federal Polytechnic, Oko (15%).

The discrepancy between computer availability and application was appraised by three-point scales— insufficiency, power supply and man power. In all the tertiary institutions, insufficient computer was shown to have the highest percentage among the militating factors, followed by power supply and lastly manpower.

In surveying the strategies for improving computer application, the study applied two assessment parameters namely, language laboratory and the use of software. Majority of the study participants (Tansian University 95%, Anambra State University 90%, Nnamdi Azikiwe University 88.89%, College of Education 80%, Federal Polytechnic 90%) opted for language laboratory as a better strategy for improving computer application.

Word processing and internet accessing were used as baseline scales of computer application to evaluate motivational capacities. The result showed that majority of the respondents were motivated by word processing— Tansian University-75%, Anambra State University—85%, Nnamdi Azikiwe University---88.89%, College of Education, Umunze---80% and federal polytechnic, Oko--- 90%.

It is therefore worthy of note that the gap between computer availability and application by lecturers is a novel discovery which must be bridged for maximum viability.

Conclusion

The study investigated the level of availability of computer for teaching and learning English language writing in the tertiary institutions, the extent of application of computer by lecturers in teaching English language writing, strategies for improving computer application in professionalizing second language writing, the motivational capacities of different aspects of computer-assisted language learning (CALL) and the factors that militate against computer-assisted English language writing. It showed a 100% availability in all the tertiary institutions surveyed.

The study showed a low rate of computer application by the lecturers—Tansian University (5%), Anambra State University (20%), Nnamdi Azikiwe University (16.61%), College of Education, Umunze (10%) and federal Polytechnic, Oko (15%). Language laboratory and the use of software were used as baseline strategies for improving computer application in tertiary institutions. Of these, Majority of the study participants (Tansian University 95%, Anambra State University 90%, Nnamdi Azikiwe University 88.89%, College of Education 80%, Federal Polytechnic 90%) opted for language laboratory as a better strategy for improving computer application.

The result showed that majority of the respondents were motivated by word processing—Tansian University-75%, Anambra State University—85%, Nnamdi Azikiwe University---88.89%, College of Education, Umunze---80% and federal polytechnic, Oko---90%.

Recommendations: The study recommended, inter alia, that

1. Tertiary institutions in Anambra state and Nigeria should procure more computer sets for the teaching and learning of English writing.
2. Language laboratories should be established in all tertiary institutions as a preferred strategy for improving computer application in English writing.
3. Tertiary institutions should be properly funded in order to acquire reliable and affordable alternatives of power supply.
4. The management team of tertiary institutions in

Anambra state and Nigeria generally, should sponsor computer-related man power development programmes to enhance capacity building.

5. Tertiary institutions in Anambra state and Nigeria should establish linkage/exchange programmes with their foreign counterparts to ensure updated relevance in the ICT sector.

6. The use of computer should be made mandatory for second language teachers to enhance computer skill proficiency and dexterity.

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