

Self Concept and Motivation Variables as Correlates of Acquisition of ICT Competence among Social Studies Students of Obafemi Awolowo University, Ile-Ife, Nigeria

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Abstract

The study examined the level of ICT competence among Social Studies undergraduates of Obafemi Awolowo University, Ile-Ife, Nigeria. It also investigated the influence of motivation variables as well as the influence of self concept on the acquisition of ICT competence. This was with a view to improving ICT competence in higher institutions of learning. The study employed survey research design. The population consisted of all Social Studies students of Obafemi Awolowo University, Ile-Ife, Nigeria. Purposive sampling technique was employed in selecting one hundred Social Studies undergraduates. Three research questions emanated from the study. Three instruments titled: "Motivational Use Scale" (MUS), 'Self-Concept Scale' (SCS) and "ICT Competence Scale" (ICTCS) were developed and used for the study. Data were analysed using simple percentages and chi-square statistics. The results among others, showed that data analysis, microsoft publishing and photoshop had the lowest competence level of 36%, 32% and 29% respectively. Also, self concept had a very strong influence on the acquisition of word processing knowledge with significant value of 0.027. It was recommended that students need to be encouraged in the use of ICT tools.

Keywords: *self concept; motivation variables; ICT competence; social studies students*

1. Introduction

Social Studies as a field of study was introduced in Nigeria many years ago with the prime purpose of inculcating in students some knowledge, skills, and aptitude that will enable them to fit into and contribute their quota towards the growth and development of the society to which they belong. According to Salami (2001:133), the overall objectives of the Social Studies Curriculum are to help the Nigerian child to:

- develop the ability to adapt to his environment;
- inculcate national consciousness and national unity;
- become good citizens capable of and willing to contribute to the development of the society;
- develop a sympathetic appreciation of the diversity and interdependence of all members of the local community and the wider national and international communities;
- inculcate the right type of skills, values and attitudes;
- acquire the desire for knowledge; respect for truth, nationality, tolerance, use of initiative, organizing capability, self-control, comradeliness, co-operativeness, liberty and social security;
- develop in children a positive attitude to citizenship and a desire in them to make a positive personal contribution to the creation of a united Nigeria;
- develop in the children ability to make reflective decisions in order to be able to resolve individual and social problems and to participate intelligently in social issues.

With these objectives and the knowledge expansion which have paved way for the advancement of Information and Communication Technology (ICT) which Adeyemi (2008) views as a tool needed for today's global and competitive environment. There is no doubt that Information and Communication Technology (ICT) has become a widely acceptable tool in our educational system.

Information and Communication Technology (ICT) competence has advanced from having the knowledge of the know-how of basic word processing to the knowledge of spread sheets and internet skills needed to accomplish given tasks within a given time-frame with limited mistakes or no error. Easton and Addo (2006) argued that ICT competence is a synonym used to describe one's ability to use ICT facilities (computer, internet, networking, broadcast and telecommunication media) effectively. It reflects a requirement for proficiency and standard which include familiarity with computer hardware, operating system, file concept, working knowledge of a word processor, at least one other software operation (such as spreadsheet, database etc), the use of the internet, and electronic mails.

Johnsons, Bartholomew and Miller (2006), and IT proficiency (2007) explained that student's ICT competence level is not just knowing how to use computers alone but to use it as a tool for organization, communication research, problem solving by surfing the web of e-mail, accessing the internet and a working knowledge of the basic capability of application software.

It is necessary at this junction to examine the place of self-concept and motivation variables that could assist in the ICT competency among Social Studies students. Self-concept which has to do with an individual's perception of "self" in relation to ICT competence is equally germane. It is an internal model which comprises self-assessments. It is specifically connected with one's abilities. Self concept can influence one's behaviour and affect both cognitive and emotional outcomes.

Motivation on the other hand is generally referred to as the driving force behind one's action fuelled by one's desire for something. It is that internal strength that gets one to move and take action on whatever goal one desires or plans to achieve. Motivation can also be said to simply mean the reason for an action or that which gives purpose and direction to behaviour. Kim (2014) defined motivational variables in learning as the attributes that make a learner to pursue changes in abilities, attitudes, beliefs, capabilities, knowledge, mental models, pattern of interaction or skills. Motivational variables may also include things that associate with students' readiness and willingness to learn, such as interest, perceived relevance, goal orientation as well as self-efficacy.

Ormrod (2010) was of the view that motivation has several effects on students' learning and behaviour in that; (i) motivation directs behaviour toward particular goals (ii) motivation leads to increase effort and energy (iii) motivation increases initiation of and persistence in activities (iv) motivation affects cognitive processes (v) motivation determines which consequences are reinforcing and punishing and (vi) motivation often enhances performance.

Motivation is of two types: extrinsic motivation is determined by individuals outside surrounding and specific tasks while intrinsic motivation is determined and found within individual as long as the task is found useful.

Intrinsic motivation pulls an individual to do something for personal satisfaction; while extrinsic motivation pulls an individual to do something for a tangible reward. However, motivation, either internal or external depends so much on the temperamental and personality of an individual. It can therefore be succinctly said that student learn better based on the perceived value of the task, subject matter, personal goals, financial incentives and others.

The rapid change which the growth of Information and Communication Technology (ICT) has brought to education is almost becoming unbelievable because the learning scenario is imperceptible like never before. For quality to be achieved in education sector, students must show positive self-concept towards acquisition of ICT competence and get themselves acquainted with information technology tools. This will give them better academic achievement and also serves as a linkage to enviable remunerative employment.

A large body of research has been conducted about the contribution of various indicators of students' ICT competence level in developed and developing countries. There is not much information on how self-concept and motivation variables could predict ICT competence among Social Studies undergraduates

2. Statement of Problem

Since the world is changing owing to advancement in technology, this changes has affected every area of human lives especially in the area of education. There is need for students of higher institution to be ICT competent for better performance in their academic work, and to have a competitive edge in the labour market and for self

employment. It is on this premise that this study seeks to investigate how self- concept and motivation variables can be used to predict Social Studies students' acquisition of ICT competence in Obafemi Awolowo University, Ile-Ife, Nigeria.

3. Objectives

1. To examine the level of ICT competence among Social Studies Students of Obafemi Awolowo University, Ile-Ife, Nigeria.
2. To investigate motivation variables that can influence the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University, Ile-Ife, Nigeria.
3. To determine the influence of self-concept on the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University, Ile-Ife, Nigeria.

4. Research Questions

1. What is the level of ICT competence among Social Studies Students of Obafemi Awolowo University?
2. Do motivation variables influence the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University?
3. Will self-concept influence the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University?

5. Methodology

The study employed descriptive survey research design. The population consisted of all Social Studies students of Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria. Purposive sampling technique was employed in selecting 100 Social Studies undergraduates from 200 level to 400 level. Three research questions emanated from the study. Three research instruments were used for the collection of the data for this study. The instruments are:

1. "Motivation Use Scale" (MUS) which is a self developed instrument. It consisted of 10 items instrument measuring variables (instructor communication style and student learning environment) that can influence student acquisition of ICT competence. Participants responded by indicating their level of agreement to each of the items using a five-point scale ranging from 5 (Strongly Agree) to 1 (Strongly Disagree).
2. Self-Concept Scale (SCS). It has 14 items tapping the appraisal of the academic, social and personality traits in individual self. Participants responded by indicating their level of agreement to each of the items using a five-point scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree) and
3. ICT Competence Scale (ICTCS). The instrument consisted of 14 items on students' level of competency in ICT tools. The instrument was rated on five-point Likert-scale of Competent (5) to Not competent (1). The three instruments were validated before use and yielded 0.78, 0.76 and 0.79 of reliability coefficients respectively. Data collected were analyzed using simple percentage and Chi-square statistics.

6. Results and Discussion

Research Question 1. What is the level of ICT competence among Social Studies Students of Obafemi Awolowo University?

Table 1. Analysis of Results on Level of ICT Competence among OAU Social Studies Students

ICT Packages	Competent	Fairly Competent	Not Competent	Total
Word Processing	69	23	8	100
Data Analysis	36	38	26	100
Academic purpose	74	18	8	100
Text and graphics	49	22	29	100
Powerpoint Presentation	50	25	25	100
Designing (Microsoft publisher)	32	27	41	100
Photoshop	29	29	42	100
Internet Browsing	83	10	7	100
E-mail Services	74	15	11	100
E-library	51	24	25	100
Video Recording	44	27	29	100
E-Payment	51	21	28	100
Mobile Phone Browsing	84	10	6	100
Networking (Facebook)	89	5	6	100

As shown in table 1 above, most of the respondents indicated that they were competent on most of the packages especially the following packages: Word Processing (69%), Internet Browsing (83%), Email Service (74%), Mobile phone browsing (84%), Academic purpose (74%), Power point (50%), E-Library (51%) and Facebook Networking (89%), over 50% were competent users of the aforementioned application. However, Microsoft Publishing, Data Analysis and Photoshop have the lowest competency level among the respondents; 32%, 36% and 29% respectively. This is acceptable because Microsoft Publisher is a professional ICT package that requires special training in acquiring its knowledge. These results underscore the need for the Social Studies students of O.A.U. to develop competency in the use of Data-analysis, Microsoft-publisher, and photo-shop packages applications.

Research Question 2. Do motivation variables influence the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University?

Table 2. Analysis of Results on Motivation Variables that Can Influence the Acquisition of ICT Competence

Motivational Variables (Learning environment)	Agree	Undecided	Disagree	Total
Making internet services available influence my ICT acquisition	87	7	6	100
Making internet services more cheaper and accessible will increase my acquisition of ICT	91	4	5	100
I use ICT facilities only when there is power supply	48	13	39	100
I learnt ICT skills because they are added into the school program	35	6	59	100
The growing trend of ICT compliance in the society has influenced my acquisition of ICT knowledge	89	5	6	100
Motivation variable (instructor communication style)	32	27	41	100
I usually consult the internet when given assignment or research work	86	8	6	100
My lecturer influences my ICT knowledge	57	15	28	100
Shortage of ICT facilities has hindered my acquisition of ICT knowledge	53	17	30	100
Social networks have encouraged me to acquire ICT knowledge	79	10	11	100
Peers have discouraged me from being ICT compliance	23	12	65	100

Amongst the two variables used as predictor of acquisition of ICT competence, 91 respondents agreed that making internet services cheaper and accessible will increase their acquisition of ICT knowledge; 89 respondents agreed that the growing trend of ICT compliance influenced their acquisition of ICT knowledge; 87 agreed that making internet service available in their environment will influence their acquisition of ICT while 35 respondents said they learnt ICT because it was added to the school curriculum. This means we have a higher percentage of students who learnt ICT because it was included in the school curriculum. However, the presence of ICT items in the student learning environment will motivate acquisition of ICT competence. Instructor communication style compare to learning environment (89.0%) has a weaker influence on acquisition of ICT competence among students having (68.75) average number of respondents.

Research Question 3. Will self-concept influence the acquisition of ICT competence among Social Studies Students of Obafemi Awolowo University?

Table 3. Acquisition of ICT Competence and Self-Concept

Acquisition of ICT Competence		Self-Concept			Chi-Square	P-Value
		Agree	Undecided	Disagree		
Word Processing	Yes	14(15.2)	53(57.6)	25(27.2)	7.196	0.027*
	No	4(5.0)	4(5.0)	-		
Data Analysis	Yes	15(20.3)	37(50.0)	22(29.7)	5.808	0.055
	No	3(11.5)	20(76.9)	3(11.5)		
Academic Purposes	Yes	15(16.3)	52(56.5)	25(27.2)	4.057	0.132
	No	3(37.5)	5(62.5)	-		
Text & Graphics	Yes	9(12.6)	41(57.7)	21(29.6)	5.931	0.052
	No	13(17.3)	39(52.0)	23(30.7)		
PowerPoint	Yes	13(17.3)	39(52.0)	23(30.7)	5.645	0.227
	No	5(20.8)	18(70.8)	2(8.3)		
Design (Microsoft Publisher)	Yes	11(18.6)	31(52.5)	17(28.8)	1.372	0.504
	No	7(17.1)	26(63.4)	8(19.5)		
Photoshop	Yes	12(20.7)	31(53.4)	15(25.9)	0.902	0.637
	No	6(14.3)	26(61.9)	10(23.8)		
Internet Browsing	Yes	15(16.1)	54(58.1)	24(25.8)	3.193	0.203
	No	3(42.9)	3(42.9)	1(14.3)		
Email Services	Yes	14(15.7)	50(56.2)	25(28.1)	5.501	0.064
	No	4(36.4)	7(63.6)	-		
E-Library	Yes	11(14.7)	43(57.3)	21(28.0)	2.938	0.230
	No	7(28.0)	14(56.0)	4(16.0)		
Video Recording	Yes	12(17.9)	38(56.7)	17(25.4)	0.773	0.942
	No	6(18.8)	18(56.3)	8(25.0)		
E-Payment	Yes	10(13.9)	44(61.1)	18(25.0)	3.177	0.204
	No	8(28.6)	13(46.4)	7(25.0)		
Mobile Phone Browsing	Yes	15(16.0)	55(58.5)	24(25.5)	4.436	0.109
	No	3(50.0)	2(33.3)	1(16.7)		
Networking (fbk)	Yes	17(18.1)	55(58.5)	22(23.4)	2.229	0.328
	No	1(16.7)	2(33.3)	3(50.0)		

*Significant at 0.05level

Results presented in Table 3 investigates the influence of Self Concept on acquisition of ICT competence which is at 0.05 level of significance. It is observed that a significant value of (0.027) was obtained on WP (Word Processing) which means that self-concept has a very strong influence on the acquisition of word processing knowledge. This is because majority of individuals believe that word processing is easy to learn and hence does not need any special training to acquire. Also, it is frequently used in most academic work, thus you can hardly find any student who doesn't know how to use this particular package. Other packages require special training, positive self-concept and motivation for one to acquire them but word processing does not. DA (Data Analysis) and T&G (Text and Graphic) on the other hand did not exhibit any significance ($p=0.055$, 0.052) because their p-value is more than 0.05. However, they are fairly significant especially when compared with VR (Video Recording 0.9). In this regard, students' perceptions about every other packages must be changed to enable them to acquire ICT packages.

7. Discussion

The findings of this study revealed that undergraduates Social Studies students were competent in some packages of ICT such as facebook networking (89%), phone browsing (84%), internet browsing (83%), e-mail services (74%) and academic purposes (74%) whereas they had the lowest competency level in data analysis (36%), microsoft publishing (32%) and photoshop (29%). These results coincided with the findings of Bayhan and Sipal (2008) who found out that students' computer competency was highly influenced by their frequency of computer use and computer experience. The findings of Agbatogun (2010) also showed that only computer use and self concept significantly predicted undergraduates' computer competence. However, undergraduates' computer packages such as microsoft publishing, data analysis where students demonstrated low level of competency should not also be jettisoned based on the findings of Jegede (2009) whose study showed that most of the software packages presently in use in Nigerian industries, schools and financial institutions are either foreign (developed outside Nigeria) or locally adapted. Since computers are useless without software (which are basically programs) and there can be no programs without programmers, the need for competence and effective programmers cannot be over emphasized.

The results of this study also showed that most of the respondents indicated that making internet services cheaper and accessible will increase their acquisition of ICT and that the growing trends of ICT compliance in the society has motivated their acquisition of ICT competence. Also, the respondents indicated that making internet services available motivated their ICT acquisition which tallied with the findings of Imhof, Vollmeyer, and Beierlein (2007) as well Agbatogun (2010) who were of the views that motivational variables such as frequency of engagement, interaction with the computer system increases the level of competence. Also, Carole and Jennifer (1988) in their study were of the view that the pattern and strength of their findings suggest that the classroom goal orientation may facilitate the maintenance of adaptive motivation patterns when mastery goals are salient and are adopted by students. In another study, Cordova & Lepper (1996) carried out an experimental study and examined the effects on the learning process of three complementary strategies – contextualization, personalization and provision of choices for enhancing students' intrinsic motivation. The study revealed that all the three strategies produced dramatic increases, not only in students' motivation but also in their depth of engagement in learning, the amount they learned in a fixed time period and their perceived competence and levels of aspiration.

The findings of this study equally revealed that students' self concept in word processing directly influenced their acquisition of ICT competence ($\lambda^2 = 0.27$, $p < 0.05$) whereas in the remaining computer packages such as data analysis, academic purposes, text and graphics, powerpoint, microsoft photoshop, internet browsing, e-mail services, e-library, video recording and e-payment, the findings indicated no significant influence of their self concept towards the packages in the acquisition of ICT competence. The findings tallied with Agbatogun (2010) whose results showed that only computer use and self concept significantly predicated undergraduates' computer competence whereas factors such as gender could not make any significant contribution to the prediction of students' computer competence level. Also, Kaino (2008) reported that there was no significant gender difference in students' perceived usefulness of computers. Also, Rozell and Gardner (2000) used a path-analysis of longitudinal data collected from 600 undergraduate students from management information department to test a model of the cognitive, motivational and affective processes impacting computer-related performance. The results showed that nearly all of the predicted paths were at least partially supported theoretical and practical implications. Mackay and Bernadette (1995) on predictors of learning performance in a computer-user training environment developed a model that incorporated several potential predictors (computer anxiety, computing aptitude, computing experience and prior general achievement) of computer-user learning. The results showed that computing aptitude and achievement are related to learning performance.

8. Conclusion and Recommendations

From the findings of this study, there is the need to produce a technological literate workforce, competent to rise up to the challenges of the technological innovations. There is therefore the need for any discipline to take the right step and repackage its curriculum to cater for innovation in its educational system. Government at various levels should equip institutions with the necessary tools and infrastructure such as computers, computer laboratories, and technical assistance that will help to enhance their ICT literacy, since frequent use of computer is an antidote to computer anxiety. Also, counseling services and motivational talks on change of attitude, values and beliefs should be provided by institutions of learning to improve students' level of self-concept.

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