

eLEARNING PERCEIVED USEFULNESS, SELF-EFFICACY AND ATTITUDE OF DISTANCE LEARNERS AND E-LEARNING UPTAKE AT THE COLLEGE OF DISTANCE EDUCATION, UNIVERSITY OF CAPE COAST

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ABSTRACT

This study has been reported on the extent to which Distance Learners are ready to take up the deployment of eLearning as an alternative mode to the fortnightly face to face sessions organized at the various study centres across the Country, Ghana. Specifically, this study sought to predict the rate of eLearning utilization taking into consideration determinants such as eLearning perceived usefulness, self-efficacy, and attitude of Distance Learners. The theory guiding this study was the Theory of Reasoned Action (TRA). According to Fishbein and Ajzen (1980), people behave in a certain direction, if they perceived that the outcome of the antecedent behavior will be beneficial to them. In this context, this study hypothesized that UCC Distance students will tend to use eLearning if they perceived usage to be beneficial to them. Three sets of questionnaires, with Cronbach's Alpha reliability coefficients above 0.70, were used to collect data. Statistical Package for Social Sciences (SPSS) was used to analyze the data collected from 472 distance students of the University of Cape Coast. Regression and one way anova statistical tools were used to test the hypotheses. The results of the study indicated that there are regional differences shown by UCC distance students in relation to how they perceived the usefulness of eLearning, their self-efficacy and attitude towards eLearning. This study also revealed that the University of Cape Coast, distance students' use of eLearning is not dependent on how they perceived eLearning to be useful. Again the study found that distance students' use of eLearning cannot be predicted by their attitude towards eLearning. Rather, Distance learners' perceived eLearning self-efficacy is a major predictor of eLearning usage at the College of Distance Education, university of Cape Coast. This study, therefore recommends that ICT- based training programmers should be periodically organized for the distance students, which should take cognizance of the regional differences established by this study.

KEYWORDS: *Attitude, eLearning, Usefulness, Self-Efficacy*

INTRODUCTION

Distance Education, (DE) according to Poley (2001), is an educational model in which the student and instructor are separated by time and place. In the interest of conceptual clarity, Keegan (1990) described the nature of DE to include the use of Information Communication and Technology (ICT) to unite teacher and learner and provide two-way communication so that the student may benefit from or even initiate dialogue.

With the use of ICT, DE can be delivered to learners all over the world. Draves 2002: p6 listed ten reasons why

eLearning should be encouraged:

- “You can learn at your own peak learning time of day.
- You can learn at your own speed.
- You can learn faster.
- You can interact more with the teacher and other participants.
- There are more topics and subjects online.
- Participants come from around the world.
- You can learn from the foremost authorities and experts.
- Online learning is less expensive and thus more accessible.
- Internet links provide more resources.
- 10. You can form a virtual community”.

With all the aforementioned benefits associated with eLearning usage to deliver DE, Distance

Education is predominately delivered through face to face mode with little or no form of technology usage in Africa.

Available relevant literature on eLearning adoption and utilization revealed that online learning is yet to take a firm root in African Universities. Learners’ interest in using eLearning is very low. In his studies to ascertain the status of eLearning in Africa (Tim 2008) found that the status of eLearning in Africa is at its lowest ebb and very much in its infancy across most of the African Countries.

The findings of Tim corroborated with Leary & Berge (2006, as cited in Nwachukwu, Egba & Elemchuku 2007). Leary and Berge found that nearly all countries in Africa are rapidly increasing the adoption and utilisation rates of eLearning. Countries like Senegal, Ghana, Uganda, Cameroon, Kenya, Tanzania, Malawi, Zambia, Botswana, Gabon, and Zimbabwe, among others, contain populations with growing dependence on the Internet. However, slow rate of eLearning adoption is common across the length and breadth of Africa. The overriding evidence in literature suggests that a lot still ought to be done, in the arena of eLearning deployment in Africa, to meet international standards.

Many researchers indicated that low uptake of eLearning is attributed to lack of appropriate and adequate technology in Africa. On his part, Yusuf (2006) recommended that electricity, internet, computers, telecommunications and postal services must be developed to a level that can support the desired scale of open and distance education in Africa.

Though researchers have done a lot to discover some of the challenges, there are other learner issues such as the learners’ self-efficacy, the perceived usefulness of eLearning and the learners’ attitude towards utilization of eLearning. It is in this context that this study was conceived.

THEORETICAL REVIEW

The Theory of Reasoned Action (TRA) as propounded by Fishbein & Ajzen (1975) formed the theoretical basis

for this study. The theory posited that an individual's behaviour is a function of both the individual's attitude towards a specific behavior, social influences and the norms surrounding that behaviour. Barring any unforeseen events, "people are expected to act in accordance with their intentions" (Ajzen, 1988, p.117). The core theme of TRA is that people will adopt, maintain or change behaviour if they believe the behaviour will benefit them. This study therefore posits that the behaviours intention and adoption of eLearning by the distance learners will be depended on their perceived attitude, self-efficacy and how useful the perceived eLearning to be.

The conceptual model based on the TRA was summarized in Figure 1.

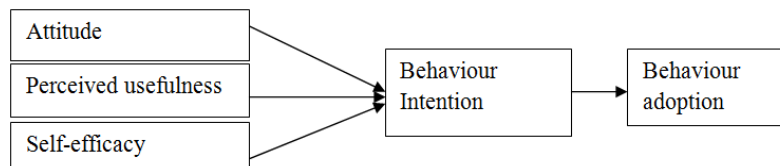


Figure 1: Adapted TRA Flow Model (Adapted from Ajzen, & Fishbein, 1980)

Figure 1 suggests that a person's behavioral intention depends on the person's attitude, perceived usefulness and self-efficacy about the behavior. The actual behavior adoption is predicted by the behavior intention. Thus, if a person intends to behave in a certain way, then it is likely that the person will do. According to Fishbein & Ajzen (1980) the stronger the intention, the more the person is expected to try and therefore the greater the possibility that the behavior being actually performed.

The TRA was chosen as theoretical frame and model because of its broad based applicability. Distance Learners' use of eLearning will be determined by their attitude and the perception they have about it. Further, perceptions of the Learners' self-efficacy play an essential role in their eventual voluntary usage of any eLearning platform.

Self-Efficacy as a Determinant of eLearning Usage

Self-efficacy according to Wood & Bandura (1989: p. 408) relates to one's beliefs in him/her capabilities to mobilize the motivation, cognitive resources and courses of action needed to meet given situational demands" It can therefore be said that the effective use of an eLearning system in the universities is influenced not only by system design features but also the user's ability to use the system effectively in a learning process.

It therefore means that learners with higher skills in ICT literacy may have confidence to use emerging technologies and have higher satisfaction with the learning of eLearning. Tinnerman (2007) conducted a study on Computer Self-Efficacy and personal attitudes regarding the viability of eLearning. Tinnerman found that high proficiency and high Self-Efficacy respondents were significantly more accepting of using technology in Distance Education than perceived low self-proficiency colleagues.

In a similar research, Compeau, Higgins & Huff, (1999) found that Self-efficacy and outcome expectations were found to impact on an individual's affective and behavioural reactions to information technology. Evidence presented in the research literature about self-efficacy is relevant to this study. To be successful in deploying eLearning at UCC, Self-efficacy of distance learners needs to be assessed in order to recommend the right strategy that will increase their eLearning usage.

Learners' Perception of eLearning Usefulness

One of the major factors identified in the literature as having effect on the eLearning usage is how the individual's perceived usefulness of the technology influences its usage. It is argued that an individual may have a high level of self-efficacy in the use of the technology but if he/she does not perceive the technology as useful, that individual cannot use it (Zhao & Bryant, 2006). The use processes of eLearning can be handled adequately if students' perceptions of technology integration are well understood beforehand (Zhao & Bryant 2006). Perceived usefulness of eLearning is considered one of the major factors determining the actual use of eLearning.

Research in the area of perceived usefulness of computers has been conducted in Pakistan by Kundi (2011). Kundi found that eLearning in Higher Education Institutions at Pakistan are determined by the perceptions of the educational technologies themselves. Whatever they perceive about the nature and role of technology, the same is reflected in their opinion about its use. However, the thought-provoking finding of the research was that the study showed a gap between the teachers' perceptions and reality. There was just a marginal match between eLearning usage and the high level of perceptions among the teachers. On the other hand, the findings of Kundi (2011) corroborated with Cagiltay, Yildirim & Aksu (2006) who found that learners' preferred learning path depend on their personal characteristics like perceived usefulness of the technologies and their learning styles.

Studies on perceived usefulness of eLearning are done in the context of ICT in general and are concentrated in the developed countries living the developing countries to wonder if these findings can be relied upon for any major decision-making processes. Again, many of the findings relate more to students pursuing on-campus eLearning programmes at the expense of distance learners. It appears there are no specific studies that involve how Ghanaian Distance Learners' perceived the usefulness of eLearning.

Learners' Attitudes towards eLearning Uptake

Positive attitude toward using eLearning is a necessary condition for eLearning utilization. Fulk, Schmitz & Steinfield (1990) found in his study that supervisors' attitude towards technology affects their emotional reactions towards its usage. Piccoli, Ahmad & Ives (2001) found that instructors' attitudes toward eLearning or IT positively influence results of eLearning since instructors are major actors in learning activities. A less enthusiastic instructor or one with a negative view of eLearning education shall not expect to have students with high satisfaction or motivation. The effectiveness of eLearning will be discounted according to the instructor's attitude. Dillon and Gunawardena (1995) found instructors' attitudes towards eLearning should be considered in system evaluation in order to explicate online course user behaviors effectively and thoroughly.

Many other researchers conducted empirical studies on attitude. Allen and Seaman (2005) looked at attitudes of academic leaders in schools across the United States. They found that most academic leaders were neutral in the opinion that teaching online was more time intensive for faculty. Udents, Alenezi, Abdul-Karim & Veloo (2010) conducted an empirical investigation into the role of enjoyment, computer anxiety, computer self-efficacy and internet experience in influencing the students' intention to use eLearning and found that attitude was the key influencing factor in the eLearning process and seemed to be related to the Learning Management System Design.

On the part of students, Ajadi, Salawu & Adeoye (2008) researched on eLearning and distance education in National Open University of Nigeria (NOUN) and found that many of the students admitted by NOUN have no computer education background, hence they are afraid of operating one, some go to the extent of hiring expert at a cost to fill their admission, registration and other document meant for them to fill online. However, the very few who have access to the computer do not know how to use it and maximize its usage.

In conclusion, it appears the discussions regarding the extent to which students' attitude could affect eLearning uptake are not conclusive in the empirical studies. As much as the empirical studies seem to establish a common trend in the understanding of factors affecting eLearning uptake by students in general, the specific issues concerning Distance learners' self-efficacy, perceived usefulness and attitude towards eLearning utilization need critical assessment especially in the developing countries. Available studies on eLearning are basically tilted towards on-campus students to the apparent neglect of distance learning which is more complex in terms of diversity of learner characteristics. This study is therefore situated within this knowledge gaps identified in the literature.

The purpose of this study is to assess how factors such as learners' eLearning self-efficacy, perceived usefulness of e-learning and learners' attitudes towards eLearning influence the use of eLearning at University of Cape Coast.

Hypotheses

The Following Hypotheses were set to Guide the Study

- H₀ There is no statistically significant difference between distance students in terms of their eLearning self-efficacy, perceived usefulness and attitude.
- H_o: Distance Learners' e-learning self-efficacy does not affect their ability to use eLearning
- H_o: Distance Learners' perceived usefulness of eLearning does not affect their ability to use eLearning
- H_o: Distance Learners' attitude towards eLearning does not determine eLearning usage

Research Methodology

To provide answers to the aforementioned hypotheses, descriptive research design was adopted to capture the state of affairs as it currently exists at the university. A quantitative measure through administration of questionnaire was used to collect data. A total probability sample size of 472 out of 56000 (Krejcie & Morgan 1970) target population of distance education students (CoDE) responded to the three sets of the questionnaires.

Instruments

To assess the eLearning self-efficacy of CoDE students, self-efficacy survey scale (SESS) was used. The perceived usefulness survey scale (PUSS) was also used to collect data on students' perceived usefulness of eLearning. Lastly, the participants' attitude towards eLearning usage was measured by Attitudes Survey Scale (ASS). The questionnaires used in this study were adopted from Nyagorme (2015). Table 1 shows the respective reliability co-efficients for the various instruments.

Table 1: Reliability Co-Efficient for the SESS, PUSS and ASS

Scale	Cronbach Alpha
Self efficacy Survey Scale (SESS)	0.85
Perceived Usefulness Survey Scale (USS)	0.92
Attitude Survey Scale (ASS)	0.91

Table 1 indicated the reliability co-efficient of the items: SESS, 0.85, PUSS, 0.92 for and ASS, 0.91 Cronbach's Alpha. The data set is considered to be reliable since the values were above 0.70 as recommended by Hair, Anderson, Tatham & Black, (1998). Therefore, the data is sufficiently reliable and valid to be used for further analyses. All the questionnaires distributed were recovered.

DATA ANALYSIS

Demographic profile of the participants

The questionnaire items 1 and 2 sought data on sex and age of the respondents.

Table 2: Gender Distribution of Respondents

Gender	Frequency	Percent
Male	266	56.0
Female	206	44.0
Total	472	100.0

Table 2 shows the gender distribution of the distance learners at UCC. Table 2 indicates that the male respondents had higher percentile representation (56%) than the female respondents (44%)

Table 3: Age Distribution of the Respondents

Age	Frequency	Percent
20-29	178	37.7
30-39	195	41.3
40-49	82	17.4
50-59	17	3.6
Total	472	100.0

Table 3 clearly showed that majority of distance learners in UCC are between 20 and 39 years.

Test of Hypotheses

Hypothesis one sought to establish that there is no statistically significant difference between distance students in terms of their eLearning self-efficacy, perceived usefulness and attitude. One way anova was used to test this hypothesis as shown in Table 4.

Table 4: Differences between Students Based on Regional Centres in Terms of their eLearning self-Efficacy, Perceived Usefulness and Attitude

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Self-efficacy	Between Groups	20.589	9	2.288	2.788	.003
	Within Groups	379.103	462	.821		
	Total	399.693	471			
Perceived usefulness	Between Groups	20.799	9	2.311	2.710	.004
	Within Groups	392.256	460	.853		

	Total	413.055	469			
Attitude	Between Groups	23.714	9	2.635	2.858	.003
	Within Groups	425.981	462	.922		
	Total	449.695	471			

Contrary to the null hypothesis, Table 4 shows that there is statistically significant difference between College of distance students based on Regional Centres in terms of their eLearning self-efficacy, perceived usefulness and attitude towards eLearning ($F(9, 462) = 2,788, p = 0.003$). Based on this finding the null hypothesis was therefore rejected.

In order to determine the direction of the difference, post hoc comparisons using Dunnett t-tests for significance was conducted as shown in Table 5.

Table 5: Post hoc Multiple Comparisons using Dunnett t-Tests for Significance

Dependent Variable	(I) Study Centre	(J) Study Centre	Mean Difference (I-J)	Std. Error	Sig	95% Confidence Interval		
						Lower Bound	Upper Bound	
self-efficacy	Dunnett t (2-sided) ^a	Greater Accra	Upper East	-.075	.175	1.000	-.54	.39
		Ashanti Region	Upper East	-.152	.178	.954	-.63	.33
		Central Region	Upper East	.236	.198	.779	-.29	.77
		Easten Region	Upper East	.191	.216	.944	-.39	.77
		Volta Region	Upper East	-.049	.199	1.000	-.58	.48
		Brong Ahanfo	Upper East	-.350	.206	.412	-.90	.20
		Western Region	Upper East	-.058	.212	1.000	-.63	.51
		Upper West	Upper East	-.037	.223	1.000	-.64	.56
		Northern Region	Upper East	-.628*	.216	.026	-1.21	-.05
Percieved usefulness	Dunnett t (2-sided) ^a	Greater Accra	Upper East	-.163	.182	.937	-.65	.32
		Ashanti Region	Upper East	-.194	.185	.863	-.69	.30
		Central Region	Upper East	.120	.205	.995	-.43	.67
		Easten Region	Upper East	-.093	.223	1.000	-.69	.50
		Volta Region	Upper East	.151	.205	.980	-.40	.70
		Brong Ahanfo	Upper East	-.357	.213	.422	-.93	.21
		Western Region	Upper East	-.277	.219	.721	-.86	.31
		Upper West	Upper East	.039	.230	1.000	-.58	.66
		Northern Region	Upper East	-.669*	.223	.020	-1.26	-.07
Attitude	Dunnett t (2-sided) ^a	Greater Accra	Upper East	.114	.185	.994	-.38	.61
		Ashanti Region	Upper East	-.060	.189	1.000	-.57	.45
		Central Region	Upper East	.026	.209	1.000	-.54	.59
		Easten Region	Upper East	.238	.228	.873	-.37	.85
		Volta Region	Upper East	.244	.210	.803	-.32	.81
		Brong Ahanfo	Upper East	-.179	.219	.964	-.77	.41
		Western Region	Upper East	-.145	.225	.992	-.75	.46
		Upper West	Upper East	.268	.237	.821	-.37	.90
		Northern Region	Upper East	-.640*	.228	.036	-1.25	-.03

* The mean difference is significant at the 0.05 level.

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

Post hoc comparisons using Dunnett t-tests for significance (alpha level $p = 0.05$) showed that the distance students at Northern region differ in their eLearning self-efficacy, $M = -0.628^*, SD = 0.216, p = 0.03$ perceived usefulness $M = -0.669^*, SD = 0.223, p = 0.02$ and attitude $M = -0.640^*, SD = 0.228, p = 0.04$ as compared to Upper East Distance students.

Hypotheses two, Three and Four

Hypotheses one, two and three sought to determine if the independent variables (eLearning self-efficacy, perceived usefulness and attitude) being measured have any statistically significant effects on students' usage of eLearning. Multiple regression analysis was done as shown in Table 6.

Table 6: Summary of Multiple Regression Analysis of the Effects of the Independent Variables on the Usage of eLearning by the DE Students

Multiple R	.264 ^a				
R ²	.070				
Adjusted R	.060				
Standard Error	.918				
F	11.642				
Df	3,466				
Variables	B	Std Error	Beta	t	Sig
(Constant)	.992	.220		4.511	.000
Self-Efficacy	.228	.053	.220	4.275	.000
eLearning Perceived usefulness	.060	.060	.060	1.010	.313
Attitude towards eLearning	.019	.055	.020	.350	.726

- Predictors: (Constant), eLearning self-efficacy, perceived eLearning usefulness & eLearning attitude
- Dependent Variable: eLearning usage

The analysis in Table 6 revealed that only 26 percent of the independent variables (eLearning self-efficacy, perceived usefulness and attitude) determined eLearning usage at the College of Distance Education. The analysis therefore mean that other factors apart from the factors identified in this study accounted for 64 percent of factors that can be used to predict the use of eLearning at the College of Distance education, UCC.

Table 6 further showed that F calculated value 11.642 is greater than F at 0.05 level of significance. The implication of this is that the combined effects of the independent variables identified in this study (Self-efficacy, eLearning perceived usefulness and attitude towards eLearning usage) did not have any significant joint influence on the usage of eLearning at CoDE. ($R^2 = .0264$; $F(3,466)=11.642$; $P > 0.05$).

Taking the individual variables into consideration, Table 6 revealed that eLearning self-efficacy of the distance students has statistically significant effect on eLearning utilization ($\beta=.22$; $t=4.275$; $p < 0.05$). Thus, eLearning self-efficacy of distance learners account for 22% of eLearning usage of distance learners.

Contrary to self-efficacy variable which influences eLearning usage, perceived usefulness of eLearning by distance students do not significantly predict eLearning usage ($\beta=.060$; $t=1.010$; $p > 0.05$). This implies that eLearning perceived usefulness by DE accounted for only 6% in the rate at which eLearning is utilized at the College of Distance Education.

Lastly, analysis in Table 6 revealed that attitude towards eLearning usage does not predict actual usage of eLearning. ($\beta = .020$; $t = .350$; $p > 0.05$). Thus, reference to Table 6, only 2% of Distance students of the College of Distance Education demonstrated that attitude towards eLearning usage can be explained by the actual eLearning uptake. Specifically, distance learners' attitude towards eLearning does not predict the use of eLearning at the University of Cape Coast, College of Distance Education.

DISCUSSION OF RESULTS

This study has shown that there are marginal regional differences among the distance students when it comes to how the students perceive their self-efficacy, usefulness and attitude towards eLearning. The difference is pronounced more between the distance students at Upper East and Northern Region of Ghana. This study is inconsistent with Vodanovich & Piotrowski, (2005) who found no differences on the survey responses on faculty attitudes toward web-based instruction at University of West Florida, Pensacola.

Contrary to the TRA flow model, this study found that eLearning perceived usefulness do not significantly influence actual usage of eLearning. This finding is consistent with the findings of Mbengo (2014) who also found that perceived usefulness proved to have insignificant relationship with behavioural intention to adopt eLearning. However, Lucas & Splitter (1999 as cited in Mbengo 2014) indicated that the finding of insignificant association between perceived usefulness and behavioural intention was quite interesting. In their study, Lucas and Splitter found perceived usefulness to have a significant impact on computer usage.

In the case of this study, it could be deduced that the Distance students of University of Cape Coast are comfortable with the use of the existing modules and do not see the need for eLearning as a complimentary model for learning on distance. Another plausible reason could be due to the fact that the distance students do not have the needed skills to venture into eLearning and therefore do not perceive it as useful for learning.

This study found that Distance students' attitude towards eLearning do not significantly influence the actual usage of eLearning. This finding is inconsistent with the findings of many researchers and the theoretical basis of this study. Zahra & George (2002) and Venkatesh (2003) argued that attitude influences behavioural intention to use technology. Chau and Hu (2001 as cited in Mbengo 2014) found that attitude seemed to be the second most important determinant of physician's intention for accepting telemedicine technology. Again, this finding is inconsistent with Selim (2005) who opined that students' behaviours and attitudes toward eLearning are a critical success factor for online learning. This means that the distance students are generally indifferent when it comes to the use of eLearning as a complimentary way of accessing distance education. The students' attitude towards eLearning could be influenced by lack of technology infrastructure at their disposal. Therefore they might not see the need to attempt using eLearning for learning purposes.

Finally, this study found that perceived eLearning self-efficacy significantly predicts eLearning usage. self-efficacy, according to Bouzaabia (2014), self-efficacy appears to be the major variable influencing the acceptance of eLearning. Lim, Hong & Tan (2008) found that majority of the students who felt they had the initiative to learn with the eLearning system, complete their studies successfully. They further found that the students also viewed their involvement and participation in eLearning as important. Again the current finding is also consistent with the writings of Poon, Lock-Teng-Low, & Gun-Fie (2004) who stated that students' self-efficacy enhances their learning interests in eLearning. Self-efficacy therefore plays a critical role in determining the rate of eLearning usage by distance students.

CONCLUSIONS

This study has provided empirical evidence pointing to the fact that there are regional differences shown by UCC distance students in relation to their perceived self-efficacy, usefulness of eLearning and attitude towards eLearning. These differences provide pointers when planning effective integration of eLearning into the University learning delivering

scheme. This study further revealed that the Distance Students of College of Distance Education, University of Cape Coast are not motivated by the usefulness of eLearning as an alternative mode of learning through Distance. Therefore, usage of eLearning is not depended on its perceived usefulness. This study also revealed that attitude towards eLearning is not a major predictor of its usage. Thus, both attitude and perceived usefulness of eLearning as independent variables are found to be the least potent contributors to eLearning usage. On the other hand, this study found that perceived eLearning self-efficacy is a major determinant of eLearning usage at the College of Distance Education, university of Cape Coast.

RECOMMENDATIONS

This study is very important for the university management as the findings provide enough foundation to recommend that deployment of eLearning at UCC, College of Distance Education hinges so much on proving ICT based training programmes for the students. The training program should take cognizance of the regional differences established by this study.

Suggestions for Further Study

Relative to this study future study could assess how lecturers are being prepared to use eLearning platforms as an alternative mode to face to face interaction sessions.

REFERENCES

1. Ajzen, I. (1988). *Attitudes, personality, and behavior*. Chicago: Dorsey Press.
2. Ajzen, I., and Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*.
3. Englewood Cliffs, NJ: Prentice-Hall.
4. Allen, I. E., & Seaman, J. (2005). *Growing by Degrees: Online Education in the United States*, Sloan Consortium (NJ1).
5. Alenezi, A. R., Karim, A. M. A., & Veloo, A. (2010). *An empirical investigation into the role of enjoyment, computer anxiety, computer self-efficacy and internet experience in influencing the students' intention to use e-learning: A case study from Saudi Arabian governmental universities*. *TOJET: The Turkish Online Journal of Educational Technology*, 9(4), 493-524
6. Ajadi, T. O., Salawu, I. O., & Adeoye, F. A. (2008). *E-learning and distance education in Nigeria*. *TOJET: The Turkish Online Journal of Educational Technology*, 7(4), 61-70
7. Reney P.Varghese, T. Selvin Jebaraj Norman & H. Samuel Thavaraj, *Perceived Stress and Self Efficacy among College Students: A Global Review*, *International Journal of Human Resource Management and Research (IJHRMR)*, volume 5, Issue 3, May-June 2015, pp. 15-24
8. Bouzaabia R., Bouzaabia O., M'Barek B. (2013). *American Journal of Industrial*
9. *and Business Management*. 3(3), 307-321. Retrieved: 11/12/17 from (<http://www.scirp.org/journal/ajibm>)
10. Cagiltay, N. E., Yildirim, S., & Aksu, M. (2006). *Students' preferences on Web-based instruction: Linear or non-linear*. *Educational Technology & Society*, 9(3), 122-136.

11. Compeau, D. R., Higgins, C.A., & Huff, S. (1999). *Social cognitive theory and individual reactions to*
12. *Computing technology: a longitudinal study*, *MIS Quarterly* 23 (4), 145–158.
13. Dillon, C. L., & Gunawardena, C. N. (1995). *A framework for the evaluation of telecommunications-based distance education*. In *17th Congress of the International Council for Distance Education*, Open University, Milton Keynes.
14. Draves, W. A. (2002) *Teaching online*. (2nd edition). Riverfalls, WI: LERN books.
15. Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to*
16. *theory and research*. Reading, MA; Addison Wesley, Publishing.
17. Fulk, J., & Schmitz, J. (1990). *A Social Influence Model of Technology Use* in J. Fulk and CW Steinfield (eds.), *Organizations and Communication Technology* (pp. 117–140).
18. Hair, J., Anderson, R., Tatham, R. And Black, W. (1998). —*Multivariate data analysis*”. (5thed). New Jersey: Prentice-Hall, Inc.
19. Rajdeepkaur & Jasbirkaur, *Study of Self Efficacy among Adolescents in Relation to Their Well-Being*, *International Journal of Humanities and Social Sciences (IJHSS)*, Volume 5, Issue 3, April-May 2016, pp. 63-68
20. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.
21. Lim, H. Tan (2008). *Acceptance of e-learning among distance learners: A Malaysian perspective*. In *Proceedings ascilite Melbourne* http://www.ascilite.org.au/conferences/melbourne08/pr_ocs/lim.pdf.
22. Keegan, D. (1990). *Foundations of distance education*. London and New York: Routledge
23. Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities*. *Educational and psychological measurement*, 30(3), 607-610.
24. Mbengo, P. (2014). *E-learning adoption by lecturers in selected Zimbabwe State Universities: An application of technology acceptance model*. *Journal of Business Administration and Education*, 6(1), 15-33
25. Nawaz, A., & Kundi, G. M. (2011). *Users of e-learning in higher education institutions*
26. *(HEIs): perceptions, styles and attitudes*. *International Journal of Teaching and Case Studies*, 3(2-4), 161-174.
27. Nyagorme P. (2015). *eLearning adoption and utilization: A comparison between University of Cape Coast Ghana and Kenyatta University, Kenya*. Retrieved: 15/12/17 from [www.http://ir.ku.ac.ke](http://ir.ku.ac.ke)
28. Nwachukwu, P. O., Egba, A.U., & Elemchuku, E.D. (2007). *ICT and distance education*
29. *programmes in a Sub-Saharan African country: A theoretical perspective*. *Journal of Information Technology Impact* 7(3), 181-194.
30. Piccoli, G., Ahmad, R., & Ives, B. (2001). *Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training*. *MIS quarterly*, 2(4), 401-426.

31. Poon, W. C., Lock-Teng Low, K., & Gun-Fie Y., D. (2004). A study of Web-based learning (WBL) environment in Malaysia. *International Journal of Educational Management*, 18(6), 374-385.
32. Poley, J. (2001). *The move to a full and flexible infrastructure for distance Education*. Retrieved:
33. 20/11/17 from <http://www.adec.edu/workshops/2001/poley-missouri/outline.html>
34. Tinnerman, L. S. (2007). *University faculty expressions of computer self-efficacy and personal attitudes regarding the viability of distance learning*. Retrieved: 28/11/17 from <http://proquest.umi.com>
35. Tim, U. (2008). *Survey of eLearning in Africa*. Retrieved: 3/11/2017 from [http://www.elearning-](http://www.elearning-africa.com)
36. [africa.com](http://www.elearning-africa.com)
37. Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). *User acceptance of information technology: Toward a unified view*. *MIS Quarterly*, 27(3), 425-478.
38. Vodanovich, S. J., & Piotrowski, C. (2005). *Faculty attitudes toward web-based instruction may not be enough: Limited use and obstacles to implementation*. *Journal of Educational Technology Systems*, 33(3), 309-318.
39. Wood, R. and Bandura A. (1989) *Impact of conceptions of ability on self-regulatory mechanisms and complex decision making*. *J. Pers. Soc. Psychol.* 56(3), 407-415.
40. Igbo, J. N, Ekwuobi & Vincent IK, *Exploring Gender Relation in the Context of Collaborative Learning and Self Efficacy of Secondary School Students*, *IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS)*, Volume 2, Issue 10, October 2014, pp. 43-54
41. Yusuf, M. O. (2006). *Problems and Prospects of Open and Distance Education in Nigeria*. *Turkish Online Journal of Distance Education*, 7(1), 22-29.
42. Zahra, S. A., & George, G. (2002). *Absorptive capacity: A review, reconceptualization and extension*. *Academy of management review*, 27(2), 185-203.
43. Zhao, Y., & Bryant, F. L. (2006). *Can teacher technology integration training alone lead to high levels of technology integration? A qualitative look at teachers' technology integration after state mandated technology training*. *Electronic Journal for the Integration of Technology in Education*, 5(1), 53-62.