

# Enhancing Social Networking Technologies Adoption through Perceived Usefulness: The setting of Ugandan Institutions of Higher Learning

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**ABSTRACT**— *Social Networking Technologies (SNTs) play a major role in education by improving student academic performance through informal learning. The purpose of this study was to examine the influence of Perceived Usefulness on the adoption of Social Networking Technologies in institutions of higher learning in Uganda. A cross sectional survey methodology was employed to gather data from 146 institutions of higher learning on the variables captured by the modified Perceived Usefulness construct of the Technology Acceptance Model. Results of correlation and regression analysis indicated that a positive and significant relationship exists between Perceived Usefulness and SNTs adoption. These findings have theoretical implications for models of SNTs adoption and practical interventions designed at increasing use of SNTs. The findings of this study suggests that managers of higher institutions of learning should advice users on the usefulness of SNTs adoption in learning so as to improve on their academic job performance, increase productivity and enhance effectiveness in teaching and learning in institutions of higher learning in Uganda.*

**Keywords**— Social Networking Technologies, Perceived Usefulness, Technology Acceptance Model, User Generated Content, SNT Adoption

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## 1. INTRODUCTION

The explosive increase of Internet users has led to intense shifts in the way of conducting business. From our daily lives to education activities, the Internet has profoundly impacted and changed the way business is done. Social Networking Technologies (SNTs) presents enormous opportunities for both learners and instructors in the world by providing an online presence throughout the day on the internet (Park, 2009). This comes with benefits like increasing students' retention levels of knowledge, improving on student engagement in teaching and learning, as well as improving on collaborative learning (Hoffman, 2009; Grover & Stewart, 2010) with an aggregate effect of improved academic performance (Zanamwe et al., 2013).

Education institutions have started using Social Networking Technologies for academic purposes through collaborative informal learning which adds value through students' participation (Grover & Stewart, 2010). This has changed the pedagogical culture from traditional teaching methods to participatory informal online methods where students easily-create user-generated content. This is manifested by Social Networking Technologies like Facebook, Twitter, YouTube, LinkedIn which provides services like RSS Feeds which extend a variety of information sources to its users immediately on command (Reuben, 2012), collaborative editing tools that extend documents' sharing and editing facility to multiple users, micro-blogging sites which provides spaces for publishing very short messages and promoting virtual communities for interaction synchronously or asynchronously (Hussain et al., 2012). In this context, SNTs is recognized as the creation, sharing and student engagement in participatory learning (Reuben, 2012).

According to recent figures, while 74% of all internet users use SNTs, in the education sector, more than 78% of the college students in the world are using SNTs (Pew Research Center, 2014) Further, extant literature shows that students

who use SNTs improve in their communication, technology and research skills (Zanamwe et al., 2013), assist in helping student connection with application concept and increasing student engagement in course material (Greenhow and Gleason, 2012; Junco, Elavsky and Heiberger, 2012). This is an indication that social networking technologies contributes to a student's life experience, knowledge and skills. This shows the importance of SNTs with in the education sector.

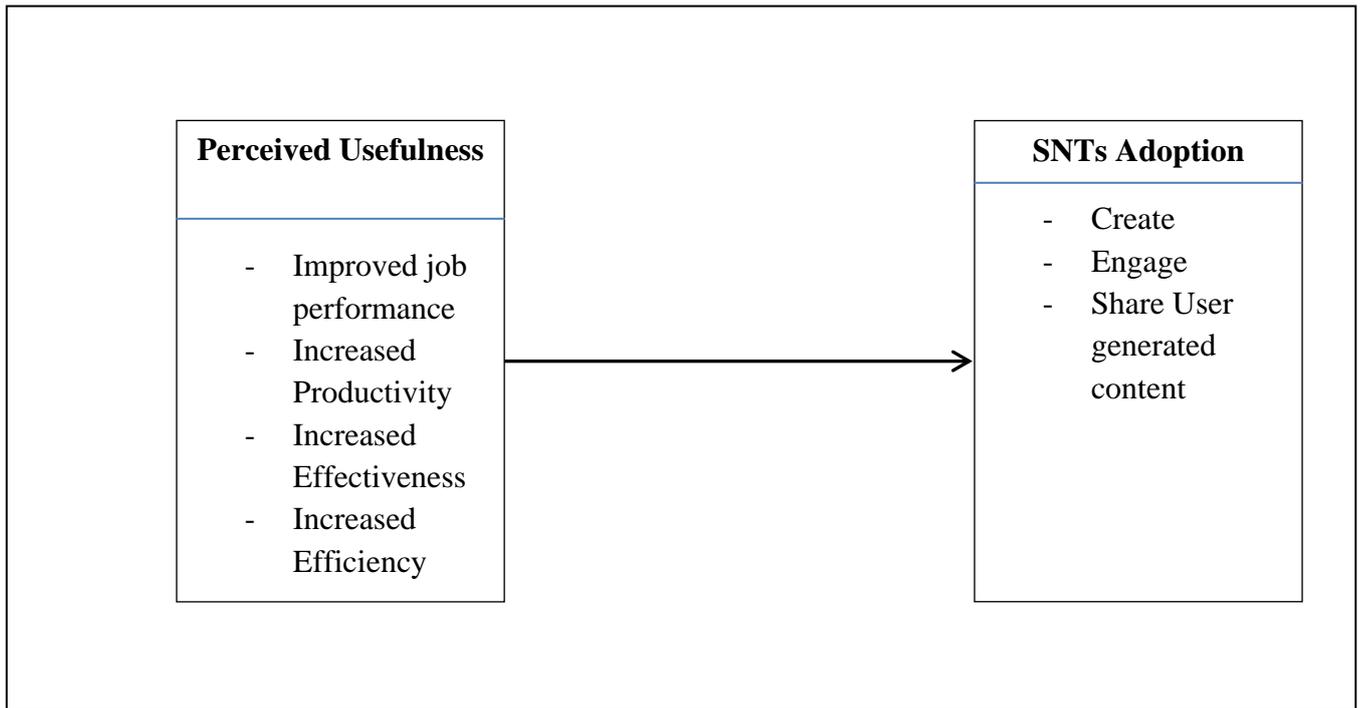
Despite the importance of SNTs adoption, in Uganda's context SNTs adoption is very low. A study by the *freedom on the net report* (2014) has demonstrated that only 15% of Ugandans use SNTs. The effect of this has been predominantly adverse, specifically low retention levels, low socialization levels, low student engagement levels and no sense of control and ownership of knowledge among students (Munguatosha, 2011). Therefore, knowing how to improve SNTs adoption remains a crucial and virgin research area.

The technology adoption literature is rife with studies that demonstrate the importance of Perceived Usefulness in improving technology adoptions (Davies, 1989; Yang & Yoo, 2004; Venkatesh and Balla, 2008; Shroff et al., 2011). However, the majority of these studies have dwelt on friendship initiation (Rouis, 2012; Sakarkar et al., 2014; Junco, 2012) and others zero on the manufacturing sector (Ndekwa, 2014; Masoodul et al, 2014; Ayman, 2013; Azam & Mohammed, 2009; Huo et al, 2011) while others have focused on the e-commerce sector (Wang et al, 2012; Lee et al, 2000; 2000; Khayati, 2013; Gary, 2015; Chung et al, 2000; Kaasinen, 2005). While SNTs has proliferated with the growth of the Internet, there have been insufficient empirical research efforts concerning its adoption in Uganda's institutions of higher learning with the only study being by (Munguatosha et al., 2011). This is ideally a knowledge gap that this study intends to fill.

Arising from the review of literature, we believe that there may be some valid factors to explain the SNT's adoption in institutions of higher learning. In this study, we examine the effect of Perceived Usefulness which is derived from the theoretical foundations of prior research in the theory of the technology acceptance model. Reliance on Perceived Usefulness by organizational managers has been argued to predict technology adoption (Zanamwe et al., 2013; Kingsly et al., 2013; Munguatosha et al., 2011; Bagozzi, 2007; Davis, 1989; Venkatesh & Balla, 2000; Lee et al., 2000). We therefore demonstrate not only how the contextual construct make educators adopt or reject SNTs as a dependable teaching platform, but also how its different facets influence the educator's adoption behaviour of the Social Networking Technologies.

The domains of Perceived Usefulness such as improved job performance, increased productivity, increased effectiveness and increased efficiency in teaching and learning using SNTs (Davis, 1989; Henderson and Divett, 2003) may therefore enable educators to view SNTs as useful that consequently aide in easy SNTs adoption.

The Perceived Usefulness domains such as improved job performance, increased productivity, increased effectiveness and increased efficiency in teaching and learning are illustrated in figure one below by the arrow that emanates from Perceived Usefulness construct to SNTs adoption. It is apparent from this preliminary work and the conceptual model presented that the study of Perceived Usefulness will have implications for both academia and practioners. Figure one below illustrates a framework to guide this study;



**Figure 1:** Conceptual Framework

Source: (Davis, 1989; Henderson and Divett, 2003; Hoffman, 2009; Hussain et al., 2012).

## 2. LITERATURE REVIEW

Davis et al., (1989) defined Perceived Usefulness as “the extent to which using a particular system will help them to perform well”. Yang and Yoo (2004) also found that Perceived Usefulness is related to the user’s belief on the system’s ability to improve performance. This therefore implies that the use of SNTs is based on the perception that it offers a collection of tools that learners can mix and match to best suit their individual learning styles and increase their academic success. In a workplace for instance, top management constantly adopt new systems that will only increase employee’s productivity and performance. Venkatesh & Davis (2000) provide evidence of this that the most important determinant of an employee’s attitude towards the adoption of a new technology is one’s perception of usefulness about the technology (Perceived Usefulness), typically explaining 30% to 35% of the variance observed in behavioral intent.

Perceived Usefulness has a significant effect on attitude towards usage. Shroff et al (2011) explains that when students perceive the e-portfolio system as one that will improve their academic performance, they may have a favorable attitude towards the usefulness of the system and therefore intention to use the system increases. Further, Shen et al., (2006) posits that educators may influence students’ Perceived Usefulness of the system by delivering useful content to students on the system which might help them to solve technical problems and improve on their academic performance.

Rose & Fogarty (2006) assert that for managers of organizations to acquire knowledge and experience of a particular technology, they have to change their perceptions of the usefulness of such technologies and therefore communicating the benefits of using SNTs will enhance the senior managers’ confidence and thus their attitude and acceptance of SNTs in teaching and learning in institutions of higher learning in Uganda. Further, knowledge about how technologies operate can reduce seniors’ fear of performance and financial risk (Rose & Fogarty, 2006) hence this would increase adoption of SNTs.

Wang et al (2012) posits that in a mobile education environment, SNTs would provide users with timely, convenient and personalized information, SNTs meets users’ multi-level needs for information, and helps users improve work efficiency or complete tasks that would be improbable when using the traditional teaching methods. Further, Perceived Usefulness induced by the typical traits (mobility, personalization and location) of an eLearning system is advantageous to intensifying users’ perception of the value of SNTs in institutions of higher learning (Ko et al., 2009). Based on this, it is hypothesized that:

*H1: Perceived Usefulness is positively related to SNT Adoption in institutions of higher learning in Uganda.*

### 3. METHODOLOGY

#### 3.1 Research Design

For this study, a quantitative cross-sectional survey approach was conducted. This was because of the type of information that was required to test the model, the wide dispersion of respondents across Uganda, confidentiality and privacy issues and therefore, a mail self-administered questionnaire was considered most appropriate.

#### 3.2 Study Population, Sample Size & Sampling Procedure

The total population for this study was 284 institutions of higher learning. A total sample of 166 institutions of higher learning was generated using the formula suggested by Yamane (1967):

$$n = \frac{N}{1 + N(e)^2} \text{ Where:}$$

$n$  = the Sample Size

$N$  = Total Population;

$(e)$  = the Sampling Error

This is because the Yamane formula assumes a normal distribution of the population (Yamane, 1967). The Yamane formula was therefore considered suitable for determining an appropriate sample size.

From the Ugandan Institutions of Higher Learning, a stratified sampling technique was used to select institutions from the institutional categories by the Uganda National Council for Higher Education. Thereafter, I used simple random sampling to ensure that each participating institution had an equal chance of being chosen. This is because the population of interest was relatively homogeneous and yet simple random sampling technique provides estimates that are unbiased and have high precision in such conditions (Meng, 2013). An aggregated sum of one hundred and forty-six questionnaires was retrieved from the field indicating a response rate of 88%. The unit of inquiry was the senior managers of institutions of higher learning and the unit of analysis was the individual institution of higher learning.

#### 3.3 Measurement of Variables

Whereas the Technology Acceptance Model (TAM) by Davis (1989) has two subscales of perceived ease of use and Perceived Usefulness, this study relied on the Perceived Usefulness subscale to measure the construct of Perceived Usefulness but this subscale was modified to suit this specific study. An example of items adopted from this subscale include; "increased job performance" and this was modified into "In this institution, using SNTs will improve my Academic Job Performance".

For SNT adoption, this study used a self-generated scale resulting from extant review of literature. According to Hussain et al (2012), Kingsly et al (2013) and Reuben et al (2012), the domains of SNT adoption are create, engage and share user generated content. An example of items generated for the SNT adoption scale is: "I engage in online discussions on SNTs". All items were later anchored on a five-point Likert scale – strongly disagree to strongly agree.

#### 3.4 Content Validity Index and Reliability Test

Following the administration of the survey, content validity index was used to establish the construct validity of the scales; content validity index was found to be greater than 0.70 which is the minimum as suggested by Amin (2007). Internal consistency of the questionnaire was determined by calculating the Cronbach alpha coefficient, reliability estimates were all greater than .70 which is the minimum as suggested by Nunnally (1978). The validity and reliability of the variables is indicated in Table 3 and Table 4 respectively;

**Table 3:** Content Validity Index

S/N	Variable	CVI	No of Items
01	Perceived Usefulness	.79	6
02	SNT Adoption	.83	8

Source: Primary Data

**Table 4:** Reliability Test

S/N	Variable	Cronbach Alpha( $\alpha$ )	No of Items
01	Perceived Usefulness	.912	6
02	SNT Adoption	.827	8

Source: Primary Data

#### 4. RESULTS

In order to test the formulated hypothesis, we use the Pearson (r) correlation analysis and regression analysis to ascertain the predictive effect of Perceived Usefulness on SNT adoption and the results are displayed in table 4 and table 5 respectively;

**Table 4:** Correlation Analysis

S/N	Variable	1	2
1	SNTA	1	
2	PUSF	.734**	1

*N=146      \*\*P < 0.01      Level (1 – tailed)*

Source: Primary Data

Key: SNTA=Social Network Technology Adoption, PUSF= Perceived Usefulness

**Table 5:** Results of Simultaneous Regression Analysis of PUSF on SNT Adoption

Variable	$\beta$	T	P
Constant		5.988	0.01**
PUSF	.734	12.978	0.01**

*N = 146; \*\*p < .01*

R = .734  
R<sup>2</sup> = .539  
Adjusted R<sup>2</sup> = .536  
F = 168.431

Source: Primary Data

Key: PUSF = Perceived Usefulness

From table 4 above, at a preliminary level, correlation results indicated that Perceived Usefulness is positively and significantly related to SNTs adoption ( $r = .734$ ;  $p < 0.01$ ). This is an indication that a positive change in Perceived Usefulness is associated with a positive change in SNT adoption. Further evidence is adduced by the results of regression analysis as displayed in table 5. Results show that approximately 54 per cent of the total variance in SNT Adoption is explained by Perceived Usefulness ( $R^2 = .539$ ;  $p < .01$ ). The regression coefficient of Perceived Usefulness was significant ( $\beta = .734$ ,  $t = 12.978$ ;  $p < .01$ ). On account of this, it can be adduced that Perceived Usefulness is positively related to adoption of SNTs in institutions of higher learning in Uganda.

#### 5. DISCUSSION

Perceived Usefulness was found to have a significant direct effect on the adoption of SNTs in higher institutions of learning in Uganda. According to the original Technology Acceptance Model, Perceived Usefulness is hypothesized to affect intention to use a particular technology and it relates to what users perceive as the job performance benefits of using such a technology.

This study found out that managers in higher institutions of learning in Uganda believe that SNTs adoption would be more useful in their job performance if successfully adopted for academic use. This might be because these managers want to adopt SNTs for they think SNTs experience will be beneficial for future job preparation and accomplishing, improved job performance from their workers and extended working hours for their workers and clients. Or, they feel it would give them competitive edge over other institutions engaged in e-learning in terms of academic delivery.

These findings are consistent with literature (Agarwal & Prasad, 1999; Davis, 1989; Venkatesh & Davis, 2012; Venkatesh et al., 2003; Venkatesh & Davis, 2000; Gulbahar & Guven, 2008; Park, 2009). This stream of literature provides evidence of the significant effect of Perceived Usefulness on intention to use a technology. The Perceived Usefulness -intention relationship is strongly based on the idea that, people form intention toward behaviors they believe will increase their system use, over and above whatever positive or negative feeling may be evoked toward the behavior.

These revelations further confirm studies by Nicolaou & McKnight (2006) which supports the view that stressing Perceived Usefulness leads to intention to use improvements. The managerial implication of these findings seem clear, the changes of intentions of customers can be enhanced through the adoption of particular systems that customers are willing to use for the transactions. Another study by Buabeng (2012) found that Perceived Usefulness is an important factor in determining the adaptation of innovations. As observed by (Davis, Bagozzi & Warshaw, 1989), a person's willingness to transact with a particular system is already considered as Perceived Usefulness. It shows that user's intention to adopt a technology is determined by perceptions of usefulness of the technology.

Based on these results, improvement in SNT adoption requires that management of institutions of higher learning make use of SNTs to accomplish academic tasks more quickly and advice users on the usefulness of SNTs adoption in learning so as to improve on their academic job performance, increase productivity and enhance effectiveness in teaching and learning in higher institutions of learning in Uganda.

## **6. CONCLUSION AND RECOMMENDATIONS**

From this study, it emerged that perception of SNTs usefulness is crucial in its adoption in institutions of higher learning in Uganda. This is because a user's perception of the usefulness of a technology eases management's ability to accomplish academic tasks more quickly. This is useful in easing academic job performance which is important in increasing productivity, service quality and enhance job effectiveness.

Managers of higher institutions of learning should therefore advice users on the usefulness of SNTs adoption in learning so as to improve on their academic job performance, increase productivity and enhance effectiveness in teaching and learning in institutions of higher learning in Uganda

## **7. REFERENCES**

- [1] Agarwal, R & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences* 1999;30(2):361–91.
- [2] Amin, M. (2005). *Social science research conception, methodology and analysis*. Kampala: ICT University Printery.
- [3] Ayman, B, N. (2013): Understanding factors affecting the adoption of M-Commerce by consumers: *Journal of Applied Sciences* 13(6): 913 – 918
- [4] Azam, S & Mohammed, Q (2009): Adoption of e-Commerce by the SMEs in Bangladesh: The Effects of Innovation Characteristics and Perceived Risk: ANZMAC 2009
- [5] Bagozzi, R. (2007). 'The legacy of the technology acceptance model and proposal for paradigm shift. *Journal of the Association for Information Systems*, 8 (4), 244-254.
- [6] Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 2012, Vol. 8, Issue 1, pp. 136-155.
- [7] Chung, J, E., Park, N., Wang, H., Fulk, J., & McLaughlin, M (2010): Age differences in perceptions of online community participation among non-users: An extension of the Technology Acceptance Model: *Computers in Human Behavior* 26 (2010) 1674–1684
- [8] Davis, F. (1989). User acceptance of computer technology: a comparison of two theoretical models'. *Management Science*, 37 (8), 982-1002.
- [9] Freedom on the Net. (2014, May 2014). Retrieved July 2, 2015, from Freedom on the Net: <http://www.freedomhouse.org/report/freedom-net/freedom-net-2014#.VbVMI-ZjTMs>
- [10] Greenhow, C., & Burton, L. (2011). Help from my "friends:" social capital in the social network sites of low-income high school students. *Journal of Educational Computing Research*, 45(2), 223–245.
- [11] Grover, A., & Stewart, D. W. (2010). Defining interactive social media in an educational context. In C. Wankel & M. Marovich & J. Stanaityte (Eds.), *Cutting edge social media approaches to business education: Teaching with LinkedIn, Facebook, Twitter, Second Life and Blogs*. Charlotte: Information Age Publishing.

- [12] Gulbahar, Y., & Guven, I. (2008). A Survey on ICT Usage and the Perceptions of Social Studies Teachers in Turkey. *Educational Technology & Society*, 11 (3), 37-51.
- [13] Henderson, R., and Megan J. Divett (2003). Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human-Computer Studies*, 59, 383-395.
- [14] Hoffman, E. (2009). Social media and learning environments: Shifting perspective on the locus of control in education. *Special Issue Technology & Social Media*, 2 (15).
- [15] Huo, Y., Zhang, P., Ma, L., & Zhang B(2011) :The influencing factors of Chinese farmers adopt m-commerce services: social network perspective: *International Journal of Innovative Computing, Information and Control: Volume 7, Number 6, June 2011: 3559 – 3570*
- [16] Hussain, I., Gulrez, N., & Tahirkheli, S. (2012). Academic Use of Social Media: Practices and Problems of University Students. *International Conference on Education and Management Innovation* (pp. 1-6). IACSIT Press, Singapore.
- [17] Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, Vol.58, pp.162–171.
- [18] Junco, R., Elavsky, C. M., & Heiberger, G. (2012). Putting Twitter to the test: assessing outcomes for student collaboration, engagement and success. *British Journal of Educational Technology*, 44(2), 273–287.
- [19] Kaasinen, E (2005): User acceptance of mobile services– value, ease of use, trust and ease of adoption: Thesis for the degree of Doctor of Technology to be presented with due permission for the public examination and criticism in Tietotalo Building, Auditorium TB104 at Tampere University of Technology, on the 22nd of June 2005 at 12 o'clock noon
- [20] Khayati, S (2013): Perceived Usefulness and Use of Information Technology: the Moderating Influences of the Dependence of a Subcontractor towards His Contractor: *Journal of Knowledge Management, Economics and Information Technology: Vol. III, Issue 6 December 2013*
- [21] Kingsly, A., Kofi, A., & Yeboah, C. (2013). A conceptual Framework of Social Networking Technologies adoption in Teaching- A case of Ghana. Elsevier, 561-592.
- [22] Ko, C., Yen, J., Chen, C. S., Chen, C. C., & Yen, C. (2008). Psychiatric comorbidity of Internet addiction in college students: An interview study. *CNS Spectra.*, 13(2), 147-153.
- [23] Lee, D., Park, J., & Ahn, J. (2000): On the explanation of factors affecting e-commerce adoption. Working Paper Last Revised 2000.
- [24] Masoodul, H., Rehana, K., Syed, S, A., & Muhammad, A(2014): Consumer Attitudes and Intentions to Adopt Smartphone Apps: Case of Business Students: *Pakistan Journal of Commerce and Social Sciences 2014, Vol. 8 (3), 763-779*
- [25] Meng, X. (2013): Proceedings of the 30th International Conference on Machine Learning, Atlanta, Georgia, USA, 2013. *JMLR: W&CP volume 28*.
- [26] Mortimer, Gary (2015): Determining the drivers of m-banking adoption: A cross cultural study. In AM2015 Academy of Marketing Conference: The Magic in Marketing, 7 - 9 July 2015, Limerick, Ireland
- [27] Munguatosha, G. M., Muyinda, P. B., & Lubega, J. T. (2011). A social networked learning adoption model for higher education institutions in developing countries. *On the Horizon*, 307-320.
- [28] Ndekwa, A, G (2014): Factors Influencing Adoption of Information and Communication Technology (ICT) among Small and Medium Enterprises (SMEs) in Tanzania: *IRACST- International Journal of Research in Management & Technology (IJRMT)*, ISSN: 2249-9563 Vol. 4, No.5, October 2014
- [29] Nicolaou, A, I., & McKnight, D, H. (2006). Perceived Information Quality in Data Exchanges *Information Systems Research* 17(4), pp. 332–351.
- [30] Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory*. Sydney, Australia: McGraw Hill.
- [31] Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Educational Technology & Society*, 12 (3), 150–162.
- [32] Reuben, R. (2012). *The Use of Social Media in Higher Education for Marketing and Communications: A Guide for Professionals in Higher Education*. Elsevier
- [33] Rose, J., and Fogarty, G. J., (2006). Determinants of perceived usefulness and perceived ease of use in the technology acceptance model: senior consumers' adoption of self-service banking Technologies. *Marketing and Management Development*, Vol.2, No.10, pp. 122-129.
- [34] Rouis, S. (2012). Impact of Cognitive Absorption on Facebook on Students' Achievement. *Cyber psychology, Behavior, And Social Networking*, Vol.15 (6), 2012, pp. 296-303.
- [35] Sakarkar, G., Deshpande, S. P., & Thakare, V. M. (2014). An online social networking architecture using context data for effective e-learning systems. In *Proceedings of the 2nd Int. Conf. on Emerging Research in Computing, Information, Communication and Applications* (pp. 33–39).
- [36] Shen, J., Li, L., Dietterich, T. G., and Herlocker, J. L. "A hybrid learning system for recognizing user tasks from desktop activities and email messages." *Proceedings of the 11th International Conference on Intelligent User Interfaces*, 2006.

- [37] Shroff, R. H., Deneen, C. C., & Eugenia, M. W. (2011). Analysis of the technology acceptance model in examining students' behavioural intention to use an e-portfolio system. *Australasian Journal of Information Technology*, 600-618.
- [38] Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences*, ( ), 273-315.
- [39] Venkatesh, V., & Davis, F. (2012). The Technology Acceptance Model Extension for Information Management Systems. *Journal of Computer and Information Technology*, 50-73.
- [40] Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*.
- [41] Venkatesh, V., Morris, M. G., Davis, F. D., & Davis, G. B. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425-478.
- [42] Wang C, Runsheng F , Kyungsoo P, Yuqiang F, Zhenhua L, Yonghao C (2012): Perceived Usefulness, Perceived Security and Adoption of Mobile Government: An Empirical Research. *Advances in information Sciences and Service Sciences (AISS)*, Volume4, Issue 6.
- [43] Wang, C., Runsheng, F., Kyungsoo, P., Yuqiang, F., Zhenhua, L., Yonghao, C. (2012). Perceived Usefulness, Perceived Security and Adoption of Mobile Government: An Empirical Research. *Advances in information Sciences and Service Sciences (AISS)*, Volume4, Issue 6.
- [44] Yamane, T. (1967). *Statistics, An Introductory Analysis* (2nd ed.). New York: Harper and Row.
- [45] Yang, H. D., & Yoo, Y. (2004). It's all about attitude: Revisiting the technology acceptance. *Decision Support System*, 38, 19-31.
- [46] Zanamwe, N., Rupere, T., & Kufandirimbwa, O. (2013). Use of Social Networking Technologies in Higher Education in Zimbabwe: A learners' perspective. *International Journal of Computer and Information Technology*, 2 (1), 8-18.