



UNIVERSITY OF NAIROBI

SCHOOL OF COMPUTING AND INFORMATICS

**POST ADOPTION EVALUATION MODEL FOR CLOUD COMPUTING SERVICES
UTILIZATION IN UNIVERSITIES IN KENYA**

BY

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Abstract

Cloud computing is a new computing paradigm that is gaining popularity in Kenya and the world over and as such this study was conducted in order to gain a better understanding of this phenomenon. This study was primarily aimed at; identifying the primary factors that influence the acceptance and use of cloud computing services in Universities in Kenya, establishing the moderating factors to the identified primary factors, present a model for post adoption evaluation of cloud computing services utilization in universities in Kenya and compare utilization levels of the different categories of cloud computing services among university students in Kenya. We reviewed literature on technology adoption theories and models, focusing on the postulates of these theories and models, their strengths and weaknesses, selected case studies where each of the theories or model had been used in technology adoption studies, the results obtained and the conclusions drawn. Our research methodology involved the use of questionnaires and Focus Group Discussion (FGD) to gather data, analysis of the quantitative data was through computation of partial correlation coefficients between the dependent and independent variables and using the Focus Group Discussion to explain some of the observed trends and phenomenon. Our findings revealed that Performance Expectancy and Facilitating Conditions were the two main factors that influence Behavioral Intention to accept cloud computing services, while behavioral intention directly influences use behavior. Effort Expectancy and Social Influence constructs were both found have no significant influence on behavioral intention. The correlation between Performance Expectancy and Behavioral Intention was moderated by gender and age, while that between Facilitating Condition and Behavioral Intention was moderated by gender, age and duration of use. Facilitating condition was found to directly affect behavioral intention contrary to the findings of Venkatesh et al., (2003), which established that facilitating conditions directly influences use behavior. The Focus Group Discussion results revealed that personal ego negatively influenced the willingness of individuals to admit that they were influenced by others towards adoption and use cloud computing services. Based on these findings, a model for post adoption evaluation of cloud computing services is presented. Due to financial constraint, the study did not introduce cloud computing services to the students in order to learn the adopter's behavior before, during and after adoption of the cloud computing services. The resulting model was derived from the data obtained from the students who were

already using cloud services. It is therefore recommended that future research work on cloud services adoption and use should include observation of the cloud services adoption process and behavior change of the students before, during and after adoption. This would allow for the validation of the resulting model presented here.

Secondly, random sampling did not allow us to collect fair and balanced samples as relates to factors such as age, gender and duration of use, which may have profound moderation effects on the model relationships. It is therefore recommended that future research should adopt or use purposeful sampling in order to gain proper representation of students in terms of age, gender and duration of use.