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Stakeholder Engagement Practices, Project Performance and Sustainability of E-Learning Projects in Selected Ugandan Public Universities

Nakalyango Justine[1], Engotoit Bernard[2], Mwase Ali[3] and Joseph Kizito Bada[4]

Abstract

The purpose of the study was to examine the influence of stakeholder engagement practices and projects performance on sustainability of E-learning projects in selected Ugandan public universities. A cross-sectional quantitative research design was used in the study with a sample of 234 respondents. Data collected were analysed using SPSS version 23. The findings reveal that both stakeholder engagement practices and project performance positively and significantly predict sustainability of e-learning projects. The study was quantitative and cross sectional which limited the findings. If the study had adopted qualitative or longitudinal designs would have yielded more detailed results for example trends of stakeholder engagement practices, project performance and sustainability of e-learning projects. The results are important for strategic application of stakeholder engagement practices and development of e-learning projects with enhanced project performance to improve sustainability of e-learning projects.

Keywords: Stakeholder engagement practices, project performance, Sustainability of e-learning projects.

Introduction

Sustainability of e-learning projects is enormously important since e-learning has become the backbone for sustainable education in the dynamic global learning environment. (World Bank, 2021). For example, globally e-learning projects enabled nations to provide education to learners during the Covid 19 Pandemic lockdowns when physical learning institutions were closed down. (Dawadi et al., 2020; Pokhrel & Chhetri, 2021). Ahmad et al. (2018) define a sustainable e-learning project as an e-learning which fulfils present and future needs of all its stakeholders. The United Nations Development Program report of 2021 ranks e-learning as a major resource for Sustainable Development. Globally, the growth of sustainable e-learning projects is tremendous in developed countries due to their far-reaching benefits (World bank, 2021) Such benefits among others include; reduced costs, ubiquitous teaching, enhanced content sharing, learning on a global perspective. (Kimwise et al., 2023; Agaba et al., 2023). Tamm (2020) reports that the global e-learning market is anticipated to increase to $336.98 billion by 2026. African countries in a bid to cope with the UN sustainable development goals and the dynamic learning environment have started several e-learning initiatives. (Africa E-learning market report, 2021). Although this is the case, such projects are viewed as unsustainable with a failure rate of 70% of the started projects (Gottschalk, 2020). Ongesa (2023) asserts that capacity for sustainable e-learning projects is

[1] Makerere University Business School
Email: bonyinyi@mubs.ac.ug
[2] Makerere University Business School
[3] Makerere University Business School
[4] Makerere University Business School

deficient in most of East African universities. Mugabo and Wanjiku (2023) report that 50%-70% of educational project in Rwanda fail to sustain.

In Uganda, the government has taken necessary steps towards promotion of e-learning initiatives in the country for example development of a national ICT Policy, investing in e-learning projects such as the Education Management Information System (EMIS), School Net, the Institute for Information and Communication Development (IICD), setting up internet access in public universities among others. (Namirembe, 2019; Kimwise et al., 2023). Despite this great effort, e-learning projects in Ugandan public universities are largely unsustainable with a reported high failure rate, some failing even before their implementation. (Gwamba et al., 2018; Namirembe, 2023). According to the Project Management Institute (PMI) a project is a temporary endeavour instigated to produce a unique product, service or result. It further defines sustainability as an approach to projects that is aimed at balancing the environmental, social and economic aspects of projects in order to meet the current needs of stakeholders without compromising those of the forthcoming generations. E-learning on the other hand has been largely defined as all technologies, platforms and resources used to facilitate educational activities and content delivery trough electronic means. (Kimwise et al., 2023). E-learning takes several forms such as computer-based, web-based, virtual classrooms, content sharing via networks, wireless mobile technology, satellite TV, videoconferencing-mails among others. (Kasse & Balunywa, 2013).

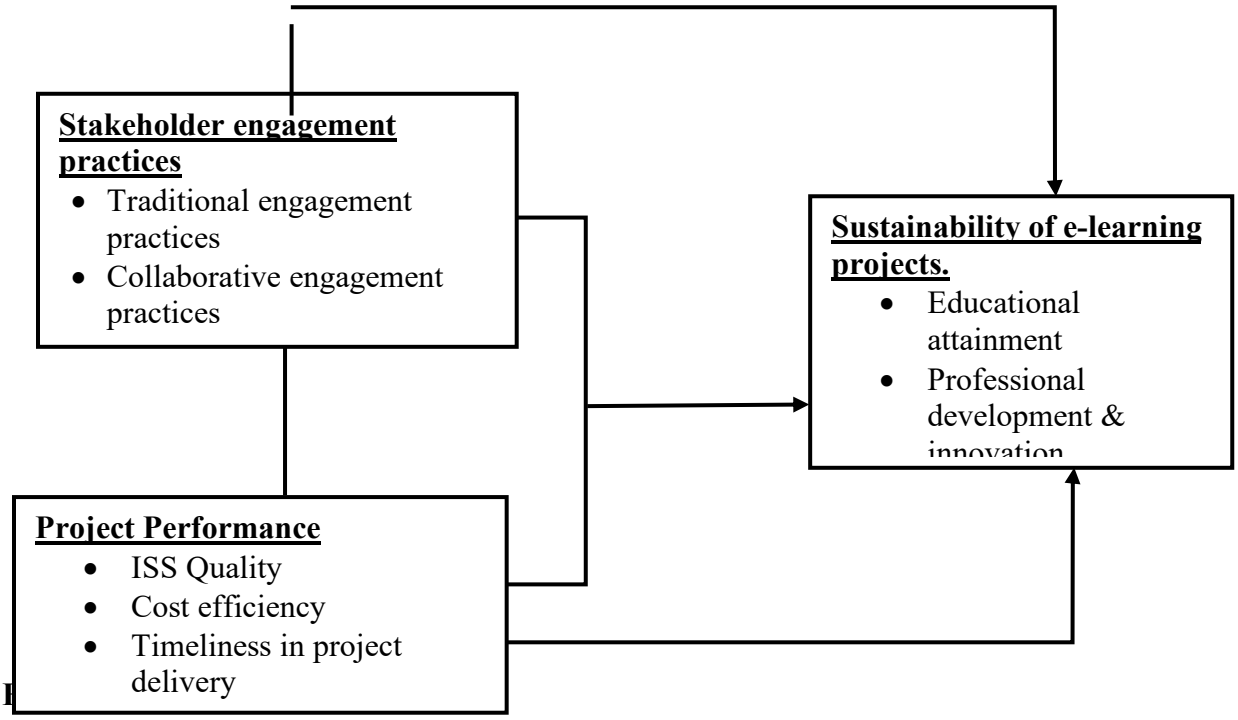
Ugandan public universities have mostly adopted web-based e-learning supported on the Moodle Platform. For instance, the Makerere University Electronic Learning Environment (MUELE), Kyambogo University E-learning management System (KELMS), among other systems customized to names of the various universities. (Mugizi & Nagasha, 2023; Namirembe, 2019). Other supportive software has also been embraced for example Zoom, Google classroom, E-mails for virtual classrooms, video conferencing, and content sharing. Currently, most universities in Uganda have embraced blended learning in the post-covid era. (Githinji et al., 2023). In Makerere University Business School and Kyambogo University, the failure to deliver effective learning by both universities during Covid exposed lack of sustainable e-learning projects even when these universities had pre-existing e-learning systems namely the MUBSEP and KELMS respectively. (Mugula & Momanyi, 2021). Furthermore, MUBS has failed at several E-learning projects for example the NettelAfrica Knowledge Environment to Web based Learning (KEWL), the International Centre for Information Technology and Development (ICITD) e-MUBS systems. (Kasse & Balunywa, 2013) According to daily monitor, Dr. Kituyi Mayoka reports that the currently used e-learning in MUBS, the MUBSEP is largely used for blended learning but the institution has not yet registered fully online Programs as accreditation with National Council for Higher education is still pending. Similarly, KYU has failed with the Open distance education Learning (ODEL) project to deliver fully online programs (Mugizi, 2024).

Noteworthy, several literatures have indicated the lack of proper stakeholder engagement practices as majorly affecting sustainability of e-learning projects. (Tran, 2023). According to Mugabo and Wanjiku (2023), 50%-70% of educational projects fail to sustain because of inadequate engagement of key project stakeholders. Most researchers who have studied e-learning in Uganda in their findings and recommendations have highlighted the stakeholder engagement gap for example Bada et al. (2020); Kimwise et al. (2023); Gwamba et al. (2018); Agaba et al. (2023) among others. Nsengiyumva and Ogbe (2022) argue that stakeholder engagement practices highly

influence project performance. Ahmad et al. (2018) mention that stakeholder training is a key critical success factor for enhancing performance and sustainability of e-learning projects. Despite the significance of stakeholder engagement practices and project performance, it is not known how stakeholder engagement practices and project performance interact to influence project sustainability. Moreover, there is sparseness of studies regarding how stakeholder engagement practices influence sustainability of e-learning projects in Ugandan public universities. It's upon this backdrop that this study seeks to investigate how stakeholder engagement practices and project performance interplay to influence sustainability of e-learning projects in Ugandan public universities.

Problem Statement

Sustainability of e-learning projects is important in ensuring that e-learning systems achieve both present and future needs of all its stakeholders (Tran, 2023). There have been continuous efforts by the government of Uganda to enhance e-learning in public universities through investing in e-learning projects, establishing supportive policies, among others (Namirembe, 2023). Despite the effort, sustainability of these projects has largely failed (Kimwise et al., 2019). In both MUBS and KYU, the existing e-learning projects have not been fully utilized by both the students and lecturers. (Bada et al., 2020; Olema et al., 2020). Furthermore, the systems are on Moodle platform and have reportedly failed to navigate and fully exploit the functionalities of LMS (Gwamba et al, 2018). Namirembe (2023) contends that Ugandan public universities cannot effectively offer fully online programs, and that e-learning is just used for blended learning. Mugula and Momanyi (2021) claim that public universities did not provide effective learning during Covid 19 pandemic yet they had pre-existing e-learning systems and resources. Furthermore, Ongesa (2023) reports high failure rate of these systems at e-assessment and e-marking. The above noted failures indicate lack of sustainability of e-learning projects in Ugandan Public universities which may be attributed to poor stakeholder engagement practices and poor project performance of e-learning projects.



Source: Developed and modified basing on the existing literature of Nsengiyumva and Ogbe, (2022); Pauna et al. (2023); Tran (2023); Ahmad et al. (2018) and Stepanyan et al. (2010).

Theoretical Foundation and Hypothesis Development

The Stakeholder Theory

The Stakeholder theory has gained a substantial global consideration and is one of the majorly used approach in studying sustainability. (Mugabo & Wanjiku, 2023). Stakeholders can be defined as groups and individuals who can influence or be influenced by the actions connected to value creation or trade. (Freeman et al., 1984, p. 25; Freeman et al., 2010, p. 9). Rhenman (quoted in Näsi, 1995, p. 22) defines stakeholders as "the individuals and groups who are depending on the firm in order to achieve their personal goals and on whom the firm is depending to achieve its goals. Freeman's stakeholder theory asserts that a firm should identity all its stakeholders and their interest and then work towards fulfilling the varying interests of all these stakeholders. Mugabo and Wanjiku (2023) suggest that a project should equally identify all its stakeholders and the project manager should work towards meeting interests of all these stakeholders to ensure success of the project. To embed sustainability into this theory; Herisch et al. (2014) studied the applicability and implementation of stakeholder theory in sustainability management and concludes that for sustainability to be achieved it is not about managing stakeholders but more about managing the stakeholders' relationships through stakeholder engagement practices such as trainings, sustainability-based value creation and regulation. They further suggest that it is imperative for management to recognize pertinent stakeholders and their interests towards sustainability. Ahmad et al. (2018) deduce that sustainable e-learning projects must be stakeholder-cantered. Ultimately, the stakeholder theory has significant relevance to the study.

The Sustainability Theory

The Sustainability theory asserts that resources in the world are limited therefore people of today should aim at achieving their present needs without conceding those of the future generation. Sustainability is one of the most evolving concept studied by many scholars relating it to several theories and concepts for example the WCED considers it as sustainable development. Chang (2017) highlights four evolving theories of sustainability namely; the theory of, Corporate Sustainability, Stakeholder theory, Corporate Social Responsibility and Green Economics. Sustainability is defined by the WCED as practices of development that are intended to meet the needs of the present without incapacitating the forthcoming generations to meet their needs. (Mugabo & Wanjiku, 2023). In relation to business and management, the International Institute for Sustainable Development defines sustainability as the adoption of business strategies and undertakings that are aimed at meeting needs of the business and its stakeholders today while preserving and enhancing the human and natural resources that will be needed in the future. (Silvius et al., 2009). According to SIDA (2007), sustainability in projects is concerned with the possibility that the benefits from a project will be maintained for a long period of time. Sustainability is important to projects because projects that fail to sustain bring about direct and indirect costs, damages credibility and trust, and prevent the intended benefits from being delivered. (Gunnstamm et al., 2009) Namirembe (2019) in her study about e-learning adoption in Ugandan universities argues that the exorbitant high failure rate of e-learning projects in Uganda requires attention from managers and system designers. All in all, the notions of the sustainability theory are important for this study.

Stakeholder Engagement Practices and Sustainability of E-Learning Projects

Project stakeholders play a pivotal role towards project sustainability (Mugabo & Wanjiku, 2023). According to the Project Management Institute a project stakeholder is an individual or group of people who may influence or be influenced by a decision, activity or outcome of a project. Windsor (2021) asserts that, stakeholders if not well engaged throughout the project life cycle may become a source of risk to the project. According to Mugabo and Wanjiku (2023), 50%-70% of educational projects fail to sustain because of inadequate involvement of project stakeholders. Kimwise et al. (2019) report that studies conducted in the past in majority of educational institutions in Uganda suggested that the failure of e-learning was caused by knowledge, policy and practice gap which can be achieved through proper stakeholder engagement practices. Most researchers who have studied e-learning in Uganda in their findings and recommendations have highlighted the stakeholder engagement gap for example Bada et al. (2020); Kimwise et al. (2023); Gwamba et al. (2018); Agaba et al. (2023); Mugizi (2024) among others. Mugabo and Wanjiku (2023) studied stakeholder engagement and sustainability of educational projects in Rwanda and found out that there exists a significant positive relationship between stakeholder engagement and sustainability of education projects with a contribution of 69.8%. Pauna et al. (2023) studied the role of governmental stakeholder engagement in sustainability of industrial engineering projects in Northern Europe. Their findings indicate that four collaborative stakeholder engagement practices reduced uncertainty and equivocality related to legal sustainability requirements and enabled development of a sustainable design solution. According to Ahmad et al. (2018), a sustainable e-learning should be stakeholder cantered which highlights that stakeholder engagement practices could be vital for sustainability of e-learning projects. However, there is lack of empirical evidence about the relationship between stakeholder engagement practices and sustainability of e-learning projects.

H_1. There is a positive relationship between stakeholder engagement practices and sustainability of e-learning projects in Ugandan public universities.

Project Performance and Sustainability of E-learning Projects

Ahmad et al. (2018) studied relationship modelling of critical success factors for enhancing sustainability and performance of e-learning and found out that to achieve desired sustainability, the e-learning must achieve high performance too. The study however does not confirm existence of a relationship between the two variables. From the reviewed literature, there is sparseness of information regarding how project performance relates with sustainability of e-learning projects. However, some studies have indicated the need for effective project performance as a leading factor to sustainability of e-learning projects. For instance, Stepanyan et al. (2010) highlight the constructs of project performance including cost efficiency and quality as indicators of sustainable e-learning. Silvius et al. (2009) in their paper about sustainability in ICT projects reports that the achievement of economic, social and environmental sustainability in ICT projects stems from project performance. Despite the scantiness of information about project performance and sustainability of e-learning projects the study seeks to find out how project performance could influence sustainability of e-learning projects in Ugandan public universities.

H_2. There is positive relationship between project performance and sustainability of e-learning projects in Uganda public universities.

Combined Effect of Stakeholder Engagement Practices and Project Performance on Sustainability of E-Learning Projects

Most empirical evidence generally describes how either stakeholder engagement practices or project performance relates with sustainability of e-learning projects. However, studies that indicate how stakeholder engagement practices and project performance jointly influence project sustainability are scanty. Despite the unclear correlation in the existing literature there is profound interest for this study to examine how the two variables could jointly influence sustainability of e-learning projects. Some researchers however have reported about the relationship between stakeholder engagement practices and project performance. For instance, Nsengiyumva and Ogbe (2022) conducted and assessment of stakeholder engagement practices and the project performance in Rwanda. Their research findings indicate that there is a significant positive relationship between stakeholder engagement practices and project performance throughout the entire project lifecycle. In New Zealand, it was established that stakeholder engagement is the main contributor to effectiveness and efficiency in project performance (Einur, et al., 2016).

In conclusion, most literature have indicated a significant positive relationship between either of the three variables leaving a research gap to understand how the three variables can collectively correlate.

H_3. Stakeholder engagement practices and project performance can jointly influence sustainability of e-learning projects in Ugandan public universities.

Methodology

Research Design

The study was cross-sectional and quantitative involving descriptive, correlation and regression statistics. A cross sectional survey design was used because it allows to obtain data on prevailing situations at the particular time (Asenahabi, 2019). A quantitative approach was preferred because it enables generalization of the findings. The unit of analysis was the selected public universities including MUBS and KYU; and the unit of inquiry was the students of Masters in Business Administration at MUBS and KYU respectively. Data was analysed using SPSS version 23.

Study Population, Sample Size and Sampling Procedure

The population of the study comprised of 647 students; 607 students of Masters in Business Administration from the Faculty of Graduate Studies and Research (FGSR) at MUBS as per the register of graduate students 2023, and 40 students of Masters in Business Administration (MBA) from the School of Graduate Studies, Kyambogo University as per register of graduate students 2023. The reason for selection of the above programs was because their e-learning use and uptake is considerably higher than others at both Universities and also being masters' students, they understand the rationale of research therefore their participation was to be easily achieved compared to Bachelors and diploma students (Bada et al, 2020; Olema et al, 2020). The study sample size consisted of 234 participants which was determined using the Krejcei and Morgan sample ---size determination table, (1970). Simple random sampling was used on students because it allows respondents equal chance of participation in the study and also it eliminates bias from the respondents. (Noor, Tajik, & Golzar, 2022)

Data Collection Instrument

The data was collected using a questionnaire which was self-administered. The questionnaire was built on a 5-point Likert scale. Responses ranged from 1=strongly disagree, 2=Disagree, 3=Not sure, 4=Agree to 5=strongly agree. The Likert scale enabled the collection of ordinal data important for quantitative analysis. (Olyanga, 2022). The questionnaire was the preferred data collection instrument for the study because it allows researchers to gather standardized information from many participants within a short period of time (Johnson & Christensen, 2017).

Measurement of Variables

The research adopted measurement of variable previously developed by other researchers. Stakeholder engagement practice was measured by traditional engagement practices and collaborative engagement practices. (Pauna et al., 2023, Nsengiyumva & Ogbe, 2022) Using 5-point Likert scale. Project performance was measured by Information, System & Service (ISS) quality, Cost efficiency and Timely project delivery. (Tran, 2023; Nsengiyumva & Ogbe, 2022) using 5-point Likert scale. Lastly sustainability of e-learning projects was measured by educational attainment and professional development & innovation. (Stepanyan et al., 2010; Ahmad et al, 2018) using 5-point Likert scale.

Reliability and Validity of the Instrument

Validity of the instrument was established using Content Validity Index (CVI) to determine the relevance of the questions in measuring the variables (Taylor, 2017). It was calculated as fraction of number of relevant items over total number of items for each variable. According to Campbell and Stanley, (1966), the CVI of 0.7 or more is considered accepted. Validity was measured using content validity index (CVI) as shown in Table 1. Reliability was determined using both pretesting and Cronbach Alpha Coefficient. After designing the questionnaire, a mini-survey of 10 questionnaires was carried out to pre-test the instrument. More to that, Cronbach Alpha Coefficient (CAC) was used as shown in Table 1. According to Nunnally, (1978), the reliability coefficient of 0.70 or more is considered accepted.

Table 1: Validity and reliability results

Variable	Number of Items	Cronbach Alpha Value	C.V.I
Stakeholder engagement practice	8	0.700	0.78
Project performance	10	0.818	0.73
sustainability of e-learning projects	10	0.799	0.82

Source: Primary Data

Validity and reliability results in Table 1 above show that the research instrument was valid and reliable since all variables measured a Cronbach Alpha Coefficient of above 0.7 and a CVI of above 0.7 which are considered acceptable.

Findings

Correlation analysis of the study variables

In order to address the study hypothesis, a Correlation analysis using Pearson correlation coefficient was used to examine the nature of relationship between stakeholder engagement

practices, project performance and sustainability of e-learning projects in Ugandan public universities. The correlation results are shown in Table 2.

Table 2: Correlation analysis

Variable	Mean	Std. Deviation	1	2	3
Stakeholder Engagement Practices (1)	3.369	.428	1		
Project performance (2)	3.504	.496	.579*	1	
Sustainability of e-learning projects (3)	3.334	.454	**.519****	**.872****	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: **Primary Data**

Results from Table 2 reveal a strong positive relationship between stakeholder engagement practices and sustainability of e-learning projects ($r= 0.519^{**,}$ $p<.01$). This means that strengthening stakeholder engagement practices is likely to lead to enhanced sustainability of e-learning projects. Furthermore, results reveal a strong positive relationship between project performance and sustainability of e-learning projects ($r= 0.872^{**,}$ $p<.01$). This means that improved project performance is likely to lead to enhanced sustainability of e-learning projects.

Regression Analysis Results

A multiple hierarchical regression analysis was conducted in order to determine the predictive power of the stakeholder engagement practices and project performance on sustainability of e-learning projects. The results from regression analysis are presented in Table 3.

Table 3: Regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.454	.144		3.143	.002		
Gender of the respondent	.024	.031	.026	.762	.447	.990	1.010
Stakeholder Engagement Practices	.023	.044	.022	.521	.603	.664	1.506
Project Performance	.789	.039	.862	20.500	.000	.661	1.514

R= .872 **R^2**= .761 **Adjusted R^2**=.757 Std. Error of the Estimate=.22410 **F**= 217.294 **Sig**=.000b

a. Dependent Variable: Sustainability of E-Learning Projects

b. Predictors: (Constant), Gender, Stakeholder Engagement Practices, Project Performance

Source: *primary data*

Findings in Table 3 show that project performance significantly predicted Sustainability of E-Learning Projects in public universities (Beta=.862, sig=.001). This implies that project performance is key in achieving Sustainable of E-Learning Projects in public universities in Uganda. Findings also revealed that stakeholder engagement practices have a positive but not significant prediction of Sustainability of E-Learning Projects in public universities in Uganda

(Beta=.022, sig=.603). This implies that whereas it is important to strengthen stakeholder engagement practices such as traditional engagement practices and collaborative engagement practices, they may not significantly predict the achievement of sustainable e-learning systems compared to improved project performance

However, a combination of both stakeholder engagement practices and project performance caused a 75.7% variance in Sustainability of E-Learning Projects, though project performance appeared to be a stronger predictor variable of sustainability of e-learning projects (Beta=.862, sig=.001) than stakeholder engagement practices (Beta=.022, sig=.603). This helped in achieving research hypothesis (iii) of the study. The findings also mean that project performance significantly influences sustainability of e-learning projects. Therefore, a change in project performance will bring about a (.086) change in sustainability of e-learning projects. Other factors other than those examined in this study contribute 24.3% variance in Sustainability of E-Learning Projects. The regression model was statistically significant (sig. < .05) and therefore it is fit to explain sustainability of e-learning projects in public universities in Uganda.

Discussion of Findings

Stakeholder Engagement Practices and Sustainability of E-Learning Projects

The study findings reveal a strong positive relationship between stakeholder engagement practices and sustainability of e-learning projects in Ugandan public universities. This means that use of stakeholder engagement practices can positively influence and enhance sustainability of e-learning Projects in Ugandan Public universities. Similar findings were reported from the reviewed literature. For example, Pauna et al. (2023) in his study about the role of governmental stakeholders in sustainability of industrial engineering projects in Northern Europe, his findings revealed a positive relationship between stakeholder engagement practices specifically the collaborative engagement practices and sustainability of projects. Mugabo and Wanjiku (2023) also reported that stakeholder engagement practices at all stages of the project lifecycle positively associate with sustainability of educational projects. This indicates that effective engagement of stakeholders through appropriate stakeholder engagement practices throughout the lifecycle of an e-learning project significantly enhances sustainability of eLearning projects.

Project Performance and Sustainability of E-learning Projects

The Study establishes a positive and significant relationship between project performance and sustainability of e-learning projects. This means that improved project performance is likely to lead to enhanced sustainability of e-learning projects. This aligns with Ahmad et al. (2018) whose study underscore a positive impact of high project performance of sustainability of e-learning systems. Similarly, Silvius et al. (2009) in their paper about sustainability in ICT projects reports that the achievement of economic, social and environmental sustainability in ICT projects stems from project performance. Therefore, universities which strengthen information, system & service quality and timely delivery of projects are likely to achieve sustainable e-learning projects.

Combined Effect of Stakeholder Engagement Practices and Project Performance on Sustainability of E-Learning Projects

The study findings reveal that stakeholder engagement practices and project performances significantly predict sustainability of e-learning projects. This means that sustainability of e-learning projects is strongly influenced by both stakeholder engagement practices and project

besides the other factors that may influence sustainability of e-learning projects in public universities. Similar findings from literature have been reported for example Ahmad et al. (2018) in his study about relationship modelling of critical success factors for enhancing sustainability and performance of e-learning suggests that stakeholder engagement practices is one of the enablers of sustainable e-learning. Furthermore study findings highlight that project performance has stronger predictive power compare to stakeholder engagement practices which implies that an improved project performance in terms of Information, system and service quality, timely project delivery can highly contribute to sustainability of e-learning projects .This conquers with suggestions of Tran (2023) in his holistic success model for sustainable e-learning who highlights the Information, System and service (ISS) quality as critical success factors towards sustainable e-learning. Additionally, stakeholder engagement practices especially collaborative engagement practices also have a significant influence on sustainability of e-learning projects. This agrees with findings of Pauna et al. (2023) who found that collaborative engagement practices significantly and positively contributed greater results to sustainability of Industrial engineering projects in northern Europe especially in the planning phase of engaging governmental stakeholders.

Conclusion and Recommendations

Basing on the study findings, it can therefore be included that, stakeholder engagement practices and project performance are key factors towards sustainability of e-learning projects especially in the Ugandan public university's context. It's upon this that the study recommends as follows; Public universities need to apply both stakeholder engagement practices that is the traditional engagement practices and the collaborative engagement practices when engaging stakeholders like students, policy makers-learning developers and vendors in matters to do with e-learning projects. This is because each category of practices plays a unique role in enhancing sustainability of e-learning projects. More to that, public universities need to ensure high performance of their e-learning projects in terms of information, system and service quality, and timely project delivery. This is because improved project performance has a better predictive power on sustainability of e-learning projects. Lastly both stakeholder engagement practices and project performance proved to have a combined effect on project sustainability, therefore public universities need to ensure that students are effectively engaged in e-learning projects through use of proper stakeholder engagement practices and also ensure better project performance in order to enhance sustainability of e-learning projects.

Limitations of the Study

The study used only quantitative data collected from the field. This study would have provided detailed findings if it had also considered collecting qualitative data. In addition to that, the study adopted a cross-sectional design due to the limited time available to the researcher. The design had a time limit as compared to a longitudinal design that would study the trends of stakeholder engagement practices, project performance and sustainability of e-learning in Ugandan public universities. Future studies could consider a mixed method to cater for the qualitative data and also consider studying sustainability of e-learning projects in even private Ugandan universities since this research only studied selected Ugandan public universities. Lastly, the study only considered students as respondents, which limited the findings that would have been collected from other stakeholders. Further studies should consider inclusion of other e-learning stakeholders in public universities for example lecturers, instructors, e-learning managers, and top management for a

wider representation of views and might yield other findings about sustainability of e-learning projects in Ugandan public universities.

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