

Research Article

RELATIONSHIP BETWEEN UTILIZATION OF LEARNING MANAGEMENT SYSTEM (LMS) AND KISWAHILI LANGUAGE STUDENTS' ACADEMIC ACHIEVEMENT IN SELECTED UNIVERSITIES IN KENYA

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ABSTRACT

Kiswahili is the most spoken language locally, regionally and in Africa. Despite its importance, academic achievement of Kiswahili students in Universities in Kenya has been unsatisfactory as evidenced by low levels of spoken and written skills as well as performance in examinations. The unsatisfactory achievement in Kiswahili is of great concern because it reduces chances of its graduates to gain employment in fields that require mastery of the language. The purpose of this study was to examine the relationship between utilization of Learning Management Systems (LMS) and Kiswahili language students' academic achievement in selected Kenyan universities. The study is deemed necessary because the available literature does not seem to examine the relationship between utilization of Learning Management Systems (LMS) and Kiswahili language students' academic achievement. The study was informed by the Moore's Theory of Transactional Distance and Self Determination theory. The sample size was 9 Kiswahili language lecturers, 3 Directors of ODeL Centers and 300 Kiswahili language students who were selected through purposive sampling and simple random sampling respectively. The research instruments were piloted and reliability index of 0.82 was obtained therefore the instruments were deemed reliable. Qualitative data was analyzed using Thematic Analysis (TA). Quantitative data was analyzed using both descriptive and inferential statistics. Descriptive statistical methods included percentages and means. Inferential statistical methods used were Pearson Correlation Coefficient and Regression analysis. Frequencies and percentages were used to summarize and describe data whereas Pearson Moment Correlation and Regression were used to establish relationships. Data analysis was done using Statistical Package of Social Sciences (SPSS). The findings established that use of Learning Management System(LMS) had significant relationship with Kiswahili language students' academic achievement ($r=0.129, p\text{-value}=0.040$). The study recommends that universities to invest in upgrading LMS infrastructure and technology to improve accessibility and engagement.

Keywords: Learning Management System (LMS), Kiswahili Language students' academic achievement, selected universities in Kenya.

INTRODUCTION

Online education has been found to have the potential to transform the education system by allowing expansion of education opportunities, changing student's population and also development of new pedagogical methods. These help in making the learning process more reliable, most efficient and extremely less stressful to both lectures and students (Plat, Raile and Yu, 2014). Online learning is said to be learner-centered; it is more flexible and it is said to improve interaction with students by provision of asynchronous and synchronous tools such as email, charts, videoconferences and forums (Dhawan, 2020). The use of e-learning platforms has led to some obstacles in students' learning process which has included decreased motivation among students, unavailability of instructors when students need help while learning, delayed feedback and a feeling of isolation following lack of physical presence of their classmates (Yusuf & Al-Banawi, 2013). OECD (2020) indicated that some of the major challenges or obstacles faced by universities included: firstly, keeping balance between online courses hence affecting health of students since they spend many hours in front of a screen; secondly, universities also had to struggle to keep the course content, consistent and relevant, clear communication to the academic community, recruiting as well as acquiring student.

Sun, Tai and Finger (2008) in a study on student's experience during online courses concluded that students have to believe that instructors should be able to know how to adapt their lectures to the online environment. They also insist that teachers should be able to provide adequate assignment as well as projects. Sun et al. (2008) continue to say that though some of the universities had used e-learning as additional method of teaching before the corona virus crisis, most of them are said not to have been fully prepared for a full online experience.

Optimization of the online education therefore required universities to take into consideration student-teacher interaction, language used in communication between instructors and students and specific terms of the study (Goian, 2004). Oye, Salleh and Lahad (2010) State that e-learning involves the use and real application of information and communication technology (ICT) at websites, personal computers (PCs), tablet (PC), cell phones, LMS, Television (TVs), radio and other means to improving teaching and learning process. Heeger (2010) posits that e-learning enables numerous higher education students to take similar programs concurrently Traditional face to face education was severely disrupted by the global pandemic and policy makers had to make a quick response and turned education from face to face to online learning using different digital platforms (Hsieh, 2020). Most universities were forced to apply free interactive platforms such as Zoom and Google classrooms, or Social Network applications (SNAs) including WhatsApp, Facebook, Twitter or Microsoft Teams for e-learning (Sobaih, et al., 2021). While some studies reported positive influence on students' academic

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achievement, other confirmed negative influence (Chandrasiri *et al.*, 2021). Recent research studies by Alamri *et al.*, (2020) examined the relationship between SNAs usage and students' academic achievement amid Covid-19. Despite the widespread adoption of online distance learning as a promising avenue for educational accessibility in Kenyan universities, there exists a significant research gap concerning the academic achievement of Kiswahili students. This concerning trend has been substantiated through an analysis of academic results from institutions such as Machakos, Murang'a, and the Catholic University of East Africa (CUEA) universities. This research gap underscores the critical need for comprehensive investigations into the factors contributing to the unsatisfactory academic achievement of Kiswahili students in Kenyan universities, particularly within the context of online distance learning.

Statement of the Problem

Kiswahili, as one of the most spoken languages locally, regionally and globally, is of paramount importance in Kenya. Being both the national language and one of the official languages, it permeates various aspects of society, including education. Its prominence is reflected in its inclusion as a core subject alongside other disciplines in both primary and secondary schools, as well as its status as a subject of study in universities.

However, despite the undeniable importance of Kiswahili, students' academic achievement in the language in Kenyan universities has been consistently low. This inadequacy manifests in low levels of proficiency in both spoken and written Kiswahili, as well as poor performance in examinations at all academic levels. Such unsatisfactory achievements raise significant concerns, particularly regarding the employability of graduates in fields where language proficiency is crucial. The paucity of literature examining the relationship between use of e-resources and academic achievement of Kiswahili students in Kenyan universities underlined the urgency of this study. By examining this relationship, the study aimed to shed light on the effectiveness of the use of e-resources to enhance Kiswahili language learning and, consequently, improve students' academic performance.

Table: 1. Kiswahili Language Analyzed Results for Machakos University 2020-2022

Year	2020	2021	2022
Entry	176	221	100
Mean Mark	54.7 C	55.7C	58.4 C

Source: Machakos University

Table: 2 Kiswahili Language Analyzed Results for Murang'a University 2020-2022

Year	2020	2021	2022
Entry	100	120	150
Mean Mark	54.5 C	59.2 C	57.9 C

Source: Murang'a University

Table: 3 Kiswahili Language Analyzed Results for CUEA University 2020-2022

Year	2020	2021	2022
Entry	160	120	180
Mean Mark	56.6 C	58.09 C	57.45 C

Source: CUEA University

Purpose of Study

The purpose of this study was to examine the relationship between utilization of Learning and Management System (LMS) and Kiswahili language students' academic achievement in selected universities in Kenya.

Research Hypothesis

H₀₁. There is no statistically significant relationship between utilization of Learning Management System (LMS) and Kiswahili language students' academic achievement in selected universities in Kenya.

REVIEW OF RELATED LITERATURE

Learning Management System and Academic Achievement

Paulsen (2002) defines Learning Management Systems as a system which provides online education services for students, teachers and managers. Alghand and Bayanga (2016) describe LMS as an online portal providing space for classroom resources, tools and activities which can be shared easily around students and instructors. Use of LMS in the learning process further helps in encouraging e-learning. Alnomay *et al.*, (2012) found that blended e-Learning Management Systems enhance the administration, documentation, tracking, and reporting of training programs, e-learning programs, and training content, resulting in improved learning outcomes.

Bradley (2020) argued that LMS use in online instruction allows instructors to facilitate discussions, plan activities, set learning expectations, and assist in problem-solving, creating an engaging learning environment. Simanullang and Rajagukguk (2020) posited that Moodle is a popular LMS application suitable for online learning, supporting various student activities like videos, discussion forums, chat, materials, and quizzes. Oliveira *et al.*, (2015) noted that universities had trained staff to operate Learning Management Systems (LMS) for e-learning management. Kasim and Khalid (2016) that LMS are used for registering students in e-learning and improving their learning experience. Adzharuddin (2013) found that LMS is used by lecturers to prepare and upload content, modules, and learning materials, connecting students and lecturers without traditional classroom confines. Cantabella *et al.*, (2019) found that Students use learning management systems (LMSs) to access, download learning materials, and upload assignments or CATs.

Susanto and Susanto (2023) highlighted challenges faced by students in using LMS in hybrid classes include lack of enthusiasm, intermittent connectivity issues, tight deadlines, and difficulties in comprehending instructional content. Gani and Berg (2019) confirmed that lecturers reported challenges in using LMSs for teaching and learning, including poor internet access, lack of skills, fear, and workload. Oliveira *et al.* (2015) stated that Internet connection is a challenge in the use of LMS in e-learning, highlighting gaps and guidelines for future research. Coates (2005) posited that LMSs have the potential to enhance student engagement and enhance campus-based education by enhancing collaboration, communication, and access to learning materials.

Chow *et al.*, (2018) argued that Lecturers who attended LMS training workshops had higher LMS activity levels and used more 'grade center' and 'assessment tool' tools in their teaching compared to untrained teachers. Cabral *et al.*, (2012) found that Faculty training is crucial in the adoption of learning management systems in higher education institutions, as faculties who attend three or more workshops develop higher technical and pedagogical proficiency in

LMS. Ahmed *et al.*, (2019) found that use of LMS has a positive impact on students' academic achievement.

Student Academic Achievement

Kpolovie (2010) stated that academic achievement is used interchangeably with academic performance and is indispensable in every formal education institution. Kpolovie (2010) continues to explain that academic achievement is a measurable index that depicts students' cognitive, affective and psychomotor domains in an educational setting. Kaplan and Saccuzzo (2005) posited that academic achievement which is usually measured with tests refers to what is actually done under existing circumstances that subsumes the process of accessing and utilizing the structure of knowledge and abilities and host affective, motivational and stylistic factors that influence the ultimate responses.

THEORETICAL FRAMEWORK

The study adopted the Moore's theory of transactional distance learning and Self-Determination theory.

Moore's Theory of Transactional Distance learning

According to Moore (1993), this theory believes that the quality and intensity of any interaction between the learner and learning environment influences academic achievement within distance learning environment. The higher the quality of interaction the more likely the learner will perform better. This interaction is said to measure the transactional distance which means the perceived pedagogical psychological and communicative distance between the learner and the learning environment. Transaction distance measures the connectedness between the learner and the learning environment. In the context of e-learning and Kiswahili language education, Moore's theory emphasizes the importance of designing online courses that provide clear structure, facilitate meaningful dialogue, and empower students to take responsibility for their learning..

Self Determination Theory (SDT)

This theory was an original thought of Ryan and Edward Deci (1985). They developed this theory as a theory of human personality, motivation and self-determination. The theory suggests that learners tend to be driven by the great need to grow and gain meaningful fulfillment. In the context of e-learning and Kiswahili language education, SDT suggests that students' learning outcomes are influenced by their intrinsic motivation to learn Kiswahili, their perceived autonomy in navigating e-learning platforms, and their sense of competence in acquiring language skills.

Moore's Transactional Distance Learning Theory and Self-Determination Theory complement in that while Moore's theory focuses on the structural and communicative dimensions of distance learning, SDT delves into the motivational and psychological factors underlying learning behavior

RESEARCH METHODOLOGY

This study mainly used a mixed method approach. This study mainly used a mixed method approach. This method usually involves the use of qualitative as well as quantitative approaches Creswell (2008).

RESULTS AND DISCUSSIONS

This section presents findings based objective of the study; to determine the relationship between the utilization of Learning Management System (LMS) and the academic achievement of Kiswahili language students.

Descriptive Results

The objective of the study sought to determine the relationship between utilization of Learning Management System (LMS) and Kiswahili language students' academic achievement in selected universities in Kenya. The results are as indicated below;

Table 4: Distribution of Students' Utilization of Learning Management System (LMS)

Learning Activity	Very Often %	Often %	Occasionally %	Rarely %	Never %
Registering for the Kiswahili Courses/units	58.7	30.6	6.3	1.2	3.2
Accessing e-learning materials (Course outlines, modules etc.)	44.4	40.9	9.5	2.0	3.2
Attending E-Lectures	24.6	28.6	23.8	5.6	17.5
Engaging in e-learning Activities (chats, discussions, forums etc.)	19.0	28.6	24.2	18.3	9.9
Doing Assignment	34.1	35.3	16.3	6.3	7.9
Uploading Assignment	21.8	32.1	24.6	9.5	11.9
Accessing academic records	34.5	32.1	16.7	3.6	13.1
Communicating with Lecturers/students/university Administration	17.9	15.5	20.2	30.6	15.9
Others	4.0	2.4	2.4	0.8	90.5

Sources: Research Data (2024)

This data highlights the key role of LMS in providing resources for Kiswahili language study, suggesting a positive impact on academic achievement through enhanced accessibility and teaching support in Kenyan universities. The findings are consistent with findings of Paulsen (2002) who defined Learning Management Systems as a system which provides online education services for students, teachers and managers. The researcher further argued that it is a system which organizes and provides access to online learning services for teachers, students and administrators.

Table 5: Distribution of Lecturers' Utilization of Learning Management System (LMS)

Teaching Activity	Very Often %	Often %	Occasionally %	Rarely %	Never %
Preparation of teaching/learning materials (Course outlines, modules etc.)	37.5	25.0	12.5	25.0	0.0
Uploading learning materials (Modules, links to e-books, Journals, digital repositories)	25.0	37.5	12.5	25.0	0.0
Organizing e-learning activities	25.0	50.0	0.0	12.5	12.5
Registering students for the Course	37.5	12.5	0.0	12.5	37.5

Delivering content during Lessons	25.0	37.5	12.5	25.0	0.0
Facilitating e-learning activities (Chats, discussions, forums)	25.0	25.0	25.0	25.0	25.0
Assessing learners (give class assignments, homework, CATs)	12.5	37.5	12.5	25.0	12.5
Giving students' feedback based on assessments results	12.5	37.5	12.5	25.0	12.5
Maintaining students' academic Records	37.5	12.5	12.5	25	12.5
Others	0.0	0.0	0.0	0.0	100

Source: Research Data (2024)

This data demonstrates a commitment to integrating digital resources into education, suggesting an opportunity to further enhance e-learning effectiveness in Kiswahili academic achievement by encouraging more consistent use among lecturers in Kenyan universities. This suggests that while e-learning practices are being significantly adopted, there is room for improvement in universal application, potentially increasing Kiswahili language academic achievement in Kenyan universities. These findings are further consistent with assertions of Bacow, Bowen, Guthrie, Lack and Long (2012) that LMS provides a variety of functions and communication tools that support teaching and learning such as assignments, announcements, quizzes, discussion forum, resources, chat among themselves.

Thematic Analysis

Availability of LMS in the Selected Universities

The researcher sought to establish the availability LMS in ODeI centers and the following are the responses of the directors;

One director confirmed, 'LMS is available in our university', another director agreed, 'The University has LMS the Moodle type' and the thirddirector noted, 'LMS (Moodle type) as well as web conferencing are available in our institution.'

The qualitative findings above indicate that all directors confirm the availability of Learning Management Systems (LMS) with specific mention of Moodle and web conferencing tools. This indicates a strong foundation for e-learning infrastructure in these universities. The availability of such resources is critical to facilitating e-learning and can enhance Kiswahili language academic achievement by providing an accessible, flexible learning environment. It underscores the importance of a robust e-learning platform to support academic programs in Kenyan universities. These findings lend credence to the findings of a study conducted by Simanullang and Rajagukguk (2020) who found that Moodle is a popular LMS application suitable for online learning, supporting various student activities like videos, discussion forums, chat, materials, and quizzes.

Inferential Results

The results were further subjected to Pearson product Moment Correlation Test Analysis and Regression Analysis. The results are as below;

Table 6: Pearson Product Moment Correlation Test Analysis Showing Relationship between Use of Learning Management System (LMS) and Kiswahili Language Students' Academic Achievement

		Correlations	
		LMS	Academic
Achievement Learning Management Systems	Pearson Correlation	1	.129**
	Sig. (2-tailed)		.040
	N	252	252
Academic Achievement	Pearson Correlation	.129**	1
	Sig. (2-tailed)	.040	
	N	252	252

*Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2024)

Pearson Moment Correlation analysis Table 6 shows a positive correlation (.129) with a significance level of .040 between Learning Management Systems (LMS) and academic achievement of Kiswahili language students. The correlational analysis provided examines the relationship between the use of Learning Management Systems (LMS) and academic achievement in Kiswahili. The correlation coefficient (Pearson's r) for the relationship between LMS use and academic achievement in Kiswahili is 0.129. This value indicates a positive correlation, which means that as the use of LMS increases, so does academic achievement in Kiswahili. However, the strength of this correlation is relatively weak. This suggests that there is a statistically significant, though slight, relationship between LMS use and improved academic outcomes in Kiswahili. Thus, the Null Hypothesis, H_01 , is rejected. These findings lend credence to the assertions of Ahmed et al. (2019) who found that use of LMS has a positive impact on students' academic achievement.

Table 7: Regression Analysis on Use of Learning Management System (LMS) and Kiswahili Language Students' Academic Achievement

Model Summary				
Model	R	R Square	Adjusted R square	Std. Error of the Estimated
1	.129	.017	.013	259.339

a. Predictors: (Constant), Learning Management System

Source: Research Data (2024)

Regression analysis Table 7 indicates a low R value (.129), suggesting a weak relationship between LMS use and academic achievement of Kiswahili language students. The R square value (.017) shows that only 1.7% of the variance in academic achievement can be explained by LMS usage. Regression analysis shows a weak positive relationship between adoption of learning management systems (LMS) and academic achievement of Kiswahili language students, evidenced by a low R-squared value of 0.017. The Null Hypothesis, H_01 is rejected but the practical significance appears to be limited. These results are consistent with the findings of a study conducted by Ahmed and Mesonovich (2019) that use of LMS has a positive impact on students' academic achievement.

Recommendations for Practice

Based on the findings, the study recommends that:

- i) Universities to invest in upgrading LMS infrastructure and technology to improve accessibility and engagement.
- ii) Universities to customize LMS features to cater specifically to the needs of Kiswahili language courses and integrate more interactive and collaborative tools to foster engagement and participation.

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