THE RELATIONSHIP BETWEEN ADOPTION OF E-ASSESSMENT 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 adoption of e-assessment and achievement among Kiswahili language students in selected Kenyan universities. The study is deemed necessary because the available literature does not seem to examine the relationship between adoption of e-assessment and Kiswahili language 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 adoption of e-assessment

did not have a significant relationship with Kiswahili language students' academic achievement (r=0.870, p-value=0.05).The study recommends that universities to develop policies to ensure that all students, regardless of their financial status or geographical location, have equal access to e-assessment opportunities. It further recommends that universities to offer ongoing training for students and lecturers on e-assessment tools and best practices to ensure effective implementation and utilization.

Key Words: *E-assessment, Kiswahili Language Academic Achievement, Selected Universities   in Kenya*

Introduction

Numerous global studies have investigated the correlation between e-learning and academic achievement in universities. A meta-analysis by Means et al. (2013) synthesized data from multiple studies and concluded that students enrolled in online courses tend to perform as well as or better than those in traditional face-to-face courses. However, the relationship between e-learning and academic achievement is influenced by various factors, including instructional design, technology infrastructure, student characteristics, and institutional support. For instance, a study by Song et al. (2021) in China highlighted the importance of interactive and engaging e-learning materials in enhancing students' academic performance. Conversely, research by Hachey et al. (2012) in Canada emphasized the significance of faculty training and support in leveraging e-learning tools effectively.

Research by Artino (2010) in the United States identified a positive association between students' satisfaction with e-learning experiences and their overall academic success. Moreover, a longitudinal study by Owusu-Fordjour et al. (2020) in Ghana revealed that students' engagement with online learning materials positively correlated with their retention and completion rates in university courses. In Africa, the first university to offer ODel was University of South Africa (UNISA. This has been brought by increased demand for higher education resulting from increased awareness of positive benefits of education (Khan, 2001).

The flexibility of open distance and e-learning methodologies has been the Key factor in their emergence as the primary mode for lifelong learning. Technology is an integral part of the teaching and learning approach (Wakahiu & Kang'ethe, 2014). Despite   recognition of Kiswahili as a vital language within the Kenyan context, students' proficiency in spoken and written Kiswahili, as well as their performance in examinations, has consistently fallen below satisfactory levels across academic

years. 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 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.

This research sought to fill an existing gap in the literature by examining the potential correlation between e-learning initiatives and the academic success of Kiswahili language students in selected universities across Kenya. By examining this relationship, the study aimed to shed light on the effectiveness of adoption of e-assessment 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 adoption of e-assessment and Kiswahili language students' academic achievement in selected universities in Kenya.

Research Hypothesis

H_{01}. There is no statistically significant relationship between the adoption of e-assessment and Kiswahili Language students' academic achievement in selected universities in Kenya.

Review of Related Literature

E-Assessment and Academic Achievement

Appiah and Tonder (2018) posit that assessment is a very critical component of teaching and learning process in any institution of higher learning. They further argue that assessment is often viewed as a component in every higher education institution. Crisp (2011) elaborates that e-assessment usually involve the use of technological device to create, deliver, store and /or report students' assessment marks and feedback.

There are two ways in which e-assessment can be delivered. The first one is web-based delivery, where students access their assessment (online assessment) and the second one is down delivery where the e-assessments are downloaded and done offline (offline assessment) (Algahtani, 2011). Biggs and Tang (2011) state that a lecturer might decide to create an easy assessment that requires less time or effort to grade. Alz'ubi (2015) posits that electronic exams are statistically significant on the academic achievement. Basarani, Yalman, and Gonen (2016) have shown the importance of electronic assessment or tests in terms of faculty members that it can acquire rapid results and make education better.

Mimirinis (2018) found that academic teachers perceive e-assessment as efficient management of the assessment process, facilitating dialogue and student engagement, enhancing student learning, and developing digital identity and community. Hettiarachch (2015) asserted that the e-assessment tool with a formative assessment model positively impacts student performance and learning by providing personalized feedback, guidance, and marking, while automatically tracking progress and competences.. Gathuri et al. (2014) posited that impersonation challenges in online examinations are a major concern, and a profile-based authentication framework (PBAF) can help make e-assessment more secure in terms of the authentication process.

Guàrdia (2020) stated that training students and lecturers frequently on the use of e-assessment can enhance student learning in Higher Education. Kiryakova (2021) posited that e-assessment in Learning Management Systems like Moodle offers new, innovative approaches for evaluating various aspects and levels of knowledge, skills, and competencies, enhancing the learning process. Osabutey et al. (2022) and Al- Hattami (2020) found that e assessments improve academic achievement.

Brink and Lautenbach (2011) stated that electronic assessment in higher education has not statistically influenced academic achievement in the University of Johannesburg. El-Koumy (2001) argued that student self-assessment slightly improved knowledge achievement and academic thinking in EFL students, but there is insufficient evidence to conclude that it significantly improves their knowledge or academic thinking.

Student Academic Achievement

Cheng (2013) asserted that the availability and adequacy of teaching and learning resources were much related to and promote organization effectiveness in terms of academic achievement. Members of staff in a school with teaching and learning resources therefore expressed the view that their school was highly effective in terms of its productivity, its adaptability as well as its flexibility. Udoh (2005) maintained that academic performance of students is phenomenon with educational, psychological and sociological connotation. Kpolovie (2010) indicated that a student's academic performance is usually measured by teacher-made tests or standardized tests.

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. 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). 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 each other by providing insight into different aspects of the e-learning experience and their impact on Kiswahili learners' academic achievement. 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 adoption of e-assessment and the academic achievement of Kiswahili language students.

Descriptive Results

The objective of the study sought to determine the relationship between adoption of e-assessment and Kiswahili language students' academic achievement in selected universities in Kenya. The results are as indicated below;

Table 4: Distribution of Adoption of E-Assessment by the Students

Mode of Assessment	Frequency	Percentage (%)
Online	62	24.6
Offline	17	6.7
Both offline and online	173	68.7
Total	252	100.0

Source: Research Data (2024)

The overwhelming preference for a mixed approach above may mean that students recognize the unique advantages of each mode to support their learning and academic achievement in Kiswahili. It can also reflect universities' strategies to cater to diverse learning preferences and technological accessibility, ensuring a comprehensive assessment that accurately measures students' understanding and expertise in subject matter. The findings are further consistent with the assertations of Algahtani (2011) who elaborated that there are two ways in which e-assessment can be delivered. The first one is web-based delivery, where students access their assessment (online assessment) and the second one is down delivery where the e-assessments are downloaded and done offline (offline assessment.

Table 5: Distribution of Adoption of Assessment by the Lecturers

Mode of Assessment	Frequency	Percentage (%)
Online	1	12.5
Both Offline and Online	7	87.5
Total	8	100.0

Source: Research Data (2024)

This data above indicates recognition among lecturers of the benefits of combining traditional and digital assessment methods to provide a more comprehensive, flexible assessment experience. Such an approach is likely to support a variety of learning styles and needs, potentially increasing student engagement and achievement in Kiswahili language learning. These findings lend credence to the findings of a study of Pesar et al. (2015) who found that digitally enhanced assessment in virtual learning environments can improve teaching and learning by providing easy-to-understand views of learning data

Thematic Analysis

Mode of Assessment by Directors in the Selected Universities

The researcher sought to establish mode of assessment used in ODel centers and the following are the responses of the directors;

One director asserted, *'In our ODel center we use online assessment only'*, another one stated, **'***In our ODel center we use both offline and online assessment'*and the third one affirmed**, '***In the ODel center we use both offline and online assessment'*

These findings suggests that the effectiveness of e-learning can be influenced by the choice of evaluation method, potentially affecting student engagement, learning outcomes and the overall success of e-learning programs in terms of Kiswahili language learning. These findings further corroborate the findings of a study conducted by Al- Hattami (2020) who found that e assessments improve academic achievement.

Table 6 : Distribution of the Students' Frequency of the Use of E-Assessment

Assessment Method	Very often %	Often %	Occasionally %	Rarely %	Never %
Class Assignment	48.8	32.5	13.9	4.0	0.8
Homework	23.4	17.5	17.5	29.0	1.6
CATs	40.9	34.1	19.9	3.2	1.6
Research /Seminar Paper	12.7	19.4	32.9	25.4	9.5
End of Semester Examination	33.7	27.8	16.7	9.9	11.9
Project	9.5	14.3	12.7	24.2	39.3
Others	2.8	5.2	2.0	2.0	98.1

Source: Research Data (2024)

The widespread use of e-assessments indicates their acceptance and potential effectiveness in enhancing learning outcomes, including in Kiswahili language studies. This may mean that incorporating e-assessments into the curriculum can significantly support academic achievement by providing a regular, accessible means to assess student progress and understanding.The findings are further consistent with the assertions of Mimirinis (2018) who found that academic teachers perceive e-assessment as efficient management of the assessment process, facilitating dialogue and student engagement, enhancing student learning, and developing digital identity and community.

Table 7 : Distribution of the Lecturers' Frequency of Use of E-Assessment

Assessment Activity	Very Often %	Often %	Occasionally %	Rarely %	Never %
Preparation of assessment tools	25.0	25.0	50.0	0.0	0.0
Giving class assignments	12.5	62.5	0.0	25.0	0.0
Giving homework to students	12.5	62.5	0.0	0.0	25.0
Administering Continuous Assessment Tests (CAT)	12.5	37.5	0.0	37.5	12.5
Administration of end of Semester examinations	25.0	0.0	0.0	0.0	75.0
Preparation of examination results	62.5	0.0	0.0	12.5	25.0
Giving students' feedback based on tests/examination results	62.5	0.0	0.0	12.5	25.0
Others	0.0	0.0	0.0	0.0	100

Source: Research Data (2024)

The data above suggests a significant difference or lack of relevance among these uncertain e-assessment tools within the current educational framework. It highlights the potential opportunity for research and integration of different e-assessment methods that can enrich the e-learning experience. Addressing this can enhance teaching strategies and improve Kiswahili language academic achievement by leveraging a wider range of digital resources.

These findings were consistent with the findings of a study of Mimirinis (2018) who found that academic teachers understand e-assessment as a means of efficiently managing and streamlining the assessment process, facilitating dialogue and student engagement, enhancing student learning, and developing digital identity and community.

Directors' Frequency of Use of E-Assessment in the Selected Universities

The researcher sought to establish directors' frequency use of e-assessment and the following are the responses of the directors;

A director noted, *'Only one CAT is administered online per semester here in our institution.'* Another director said, *'Online assessment is frequently done as per guideline of the center.'* The third director stated, *'2 out of 3 assessments are done online in the university.'*

This above variation reflects different levels of engagement with digital tools for assessment, highlighting an opportunity to standardize and increase the use of e-assessment across the board. Such standardization can improve consistency in e-learning experiences and potentially positively impact Kiswahili language academic achievement by providing more regular and accessible assessment opportunities. These findings were consistent with the findings of a study conducted by Brink and Lautenbach (2011) and found that The University of Johannesburg implemented electronic assessment in some departments in 2004, but faced challenges in using one e-assessment tool within the university.

Inferential Results

The results were further subjected to Pearson product Moment Correlation Test Analysis and Regression Analysis The results as indicated as follows;

Table 8: Pearson Product Moment Correlation Test Analysis Showing Relationship between Use of E-assessment and Kiswahili Language Students' Academic Achievement

Correlations			
		Use of E-assessment	Academic achievement
Use of E-assessment	Pearson Correlation	1	0.87**
	Sig. (2-tailed)	.167**	
	N	251	251

Academic achievement	Pearson Correlation	0.087	1
	Sig. (2-tailed)	0.167	
	N	252	252

Source: Research Data (2024)

The observation from the Pearson correlation data in the Table 8, with a significance level (Sig. 2-tailed) of 0.167, suggests that the null hypothesis ('there is no significant relationship between e-assessment and Kiswahili language students' academic achievement') cannot be rejected. Kiswahili language studies among the sampled students. The correlation analysis revealed a Pearson correlation coefficient of 0.87 between the utilization of e-assessment and students' academic achievement. Hence, the Null Hypothesis, H_o1, is accepted.

In conclusion, while the hypothesis of no significant relationship between e-assessment utilization and students' academic achievement was not supported by the statistical analysis, the observed correlation did not reach statistical significance. These results are inconsistent with the findings of a study conducted Hettiarachch (2015) who asserted that the e-assessment tool with a formative assessment model positively impacts student performance and learning by providing personalized feedback, guidance, and marking, while automatically tracking progress and competences.

Table 9: Regression Analysis on Use of E-Assessment and Kiswahili Language Students' Academic Achievement

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.087[a]	.008	.004	261.002

a. Predictors: (Constant), E-assessment

Source: Research Data (2024)

Regression analysis Table 9 shows a very low R value (0.087), indicating a weak linear relationship between e-assessment usage and academic achievement in Kiswahili. The R square value of 0.008 indicates that only 0.8% of the variance in Kiswahili academic achievement can be explained by the use of e-assessment. Hence, the Null Hypothesis, **H$_o$1**, is accepted.

These findings suggest that factors other than the use of e-assessment play a more significant role in determining student performance in Kiswahili language learning. These findings are inconsistent with the findings of Appiah and Tonder (2018) who stated that e-assessment has a great potential to support and even improve student learning. Credible e-assessment will enhance students' learning since it encourages them to be sincere about their own learning approach.

Summary of Findings and Conclusion

The relationship between the adoption of e-assessment and Kiswahili language students' academic achievement explores the integration of digital evaluation methods into the educational process and its impact on learning outcomes. A significant majority of students and lecturers exhibit a preference for a blended approach to assessment, combining both online and offline methods. The statistical analysis presents a nuanced view of the relationship between e-assessment practices and Kiswahili language academic achievement.

Recommendations for Practice

Based on the findings, the study recommends that;

i) Universities to develop policies to ensure that all students, regardless of their financial status or geographical location, have equal access to e-assessment opportunities.

ii) Universities to offer ongoing training for students and lecturers on e-assessment tools and best practices to ensure effective implementation and utilization.

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