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Does Technology Influence Students' Attitude Towards Learning Kiswahili Proverbs?

Introduction / Background

Students' attitude is generally considered to influence their academic performance

It is however not known if the same would apply in the teaching and learning of Kiswahili proverbs.

The performance of students in Kiswahili in KCSE in Kenya is probably due to the use of teacher-centered methods. Emerging technologies are thought to revolutionize the way teaching and learning is carried out in other areas of learning (e.g., 2009; Youssef, 2012).

Technology is known to enhance the learning experience

Statement of the problem

There doesn't seem to be sufficient data on students' attitude towards Kiswahili proverbs using either teacher-centered methods or new technology.

It is also not known if technology would apply in the teaching and learning of Kiswahili proverbs to lead to positive attitude

Study objectives

The objective of this study was to determine the effect of video technology on students' attitude towards Kiswahili proverbs.

To achieve the objective stated above, the study tested the hypothesis that the use of video technology in teaching Kiswahili proverbs had no significant effect on students' attitude.

Review of literature

Attitude can be defined in various ways. Conceptually, it is the readiness of the psych to act or react in a certain way towards objects in our environment. It is a tendency to think, feel, or act positively or negatively towards objects in our environment. There are no direct measures to attitude (Ajzen, 2011). The indirect measures of attitude are either single item or multi-items.

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Attitude has three major dimensions Affective, Behavioral and Cognitive (ABC).

The affective dimension deals with emotions; behavior refers to actions; and cognitive deals with the mind.

Several models (theories) are attributed to attitude.

They are the **Expectancy Value Model**, Vector Model, **Tripartite Model** and Technology Acceptance Model

Expectancy value model- value importance and perceived instrumentality are separate dimensions of attitude structure $\sum(ba)$. Where: A is attitude towards a certain object; \sum sum; b is the strength of the belief and a is the evaluative attribute.

Factor Model on the other hand is a two dimensional structure of attitudes. On one dimension is represented an affective component of attitude (liking or favourable)

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The Tripartite Model is also referred to as the ABC model (feelings, actions and beliefs).

Technology Acceptance Model is an applied model of technology (Gardner & Lambert, 1972).

They suggest that the intention to use a technology is influenced by the attitude towards the technology and the perception of its usefulness.

Attitude is in turn influenced by a person's belief in how useful the technology is and how easy it is to use (Shah & Khan, 2015).

cont

The perception of ease is measured by the degree to which using a technology is free of effort.

Usefulness is measured by the degree to which technology can help to improve task performance

This model was adopted for this study.

Methodology

Quasi-Experimental design was used-where research ethics allow a randomization of students for research purposes. This increased the study confidence that the outcomes observed were the result of the technology employed and not a result of extraneous variables.

Common Four Non-Equivalent-Group Design was adopted as a rigorous design used in quantitative studies and it addresses specific threats to internal validity (Symmons, 2008).

Sampling

Target population	Form 2 students in Kenya
Accessible population	Form 2 students in extra-county secondary in Nakuru county
Inclusion criteria	Single sex/ Boarding schools Availability of LCD projector
Exclusion criteria	Mixed schools Day Schools
Sample	All 8 single sex extra county schools in Nakuru County

Solomon Four

	Pre-Test	Treatment	Post-Test	
				If $O1 < O2$ main effect
				If $O4 > O5$ testing threat
				If $O2 = O6$ effect of techr
	O1	X	O2	If $O5 > (O2, O4, O6)$ cont confounders....age, sex an teacher experience
	O3		O4	
			O5	
		X	O6	

Data analysis

Assumptions of normal distribution

Exploratory analysis

Comparison of two groups

T-Test

Comparison of more than four groups

ANOVA

Assumption of normality

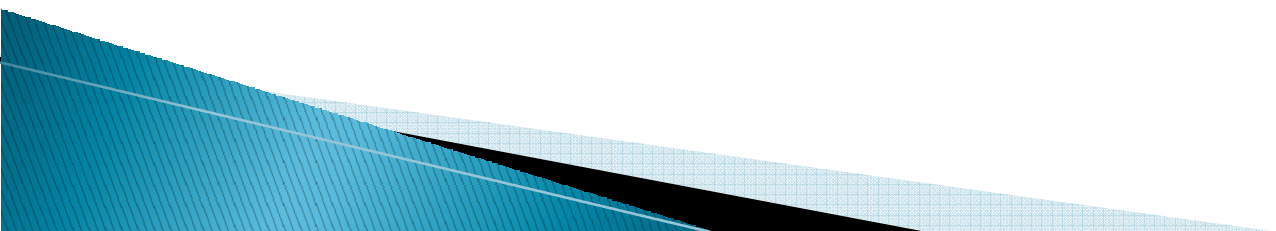
Mann-Whitney U Test

Effects of technology

ANOVA

Each group different from each other

Scheffe post-hoc Test



standardization

$MP = (x_i - \text{the minimum score}) / (\text{the maximum score} - \text{the minimum score})$

where x_i is the raw score for each student in the variables of interest.

Effectively, this formula converts the raw scores into 0-1 interval.

Higher scores indicated a higher intensity of the given dimension.

When multiplied by 100, the converted scores became percentages.

cont

s helped to identify factors showing an association of 0 with each of the three dimensions of attitude.

helped rule out multi-collineality with the usual criterion of association of beyond 0.70 being applied.

forward stepwise regression was used to control the problem of multi-collineality.

the three models each variable was entered separately compared with the variables already in the model.

the variables already in the model became non-significant old variables were dropped out of the model.

estimation of a Generalized Linear Model -GLM

using the maximum likelihood method. This allowed for the investigation of the effect of technology on attitude while adjusting for possible confounders.

The investigated confounders included student age, sex and teacher experience.

$$y = \alpha + \beta_1 * \text{group} + \beta_2 * \text{age} + \beta_3 * \text{sex} + \beta_4 * \text{teacher experience} + e_i$$
where y represents each of the three sub-dimensions of attitude, α is the constant (intercept), β_i are the effects of each of the independent variables and e_i are the errors of estimation.

Presentation of Findings

	Pre-Test		Post- Test	
	Mean	Median	Mean	Median
Attitude A (Study)				
	.65	.75	.66	.75
	.77	.81	.66	.68
			.71	.75
			.68	.75
Attitude B (Teaching and Learning)				
	.69	.75	.68	.68
	.71	.75	.63	.66
			.72	.75
			.68	.68
Attitude C (Time)				
	.57	.58	.41	.42
	.57	.58	.38	.42
			.42	.42

Discussion of findings

fixed outcome.

three dimensions of attitude were found

literature agrees that attitude is multidimensional

departure from other literature that points to the ABC model

which is generic

this study had empirical estimation that were specific

Conclusions

These results suggest that the null hypothesis H_0 which states ‘The use of technology in teaching Kiswahili proverbs will have no significant effect on students’ attitude is supported.

It is therefore concluded that technology had no significant effect on student attitude.

A negative non-linear relationship between teachers’ experience and students’ attitude

Recommendations

Use of specific instruments as opposed to generic ones

Teachers: inservice course for < 10 years and > 20 years experience

Areas for further study

A study on teachers' attitude towards technology needs to be carried out especially those teaching Kiswahili.