

Research Article

Influence of Instructional Resource Management on Academic Performance of Trainees in Public Primary Teacher Training Colleges in Kenya

Margaret Nyambura Wagithunu¹ Dr. Paul Edabu^{1*} and Dr. Ganatusanga Haroon Sinan^{1*}¹Mount Kenya University

*Corresponding Author

Dr. Paul Edabu and Dr. Ganatusanga Haroon Sinan

Abstract: Importance of human resource management on academic performance of teacher-trainees in teacher training colleges cannot be over-emphasized. However, academic performance of teacher-trainees has been dismal and continues to be on a downward trend. The purpose of this study was to investigate the influence of instructional resource management on academic performance of trainees in public primary teacher training colleges in Kenya. The study was guided by the human capital theory. The study adopted mixed methods approach and thus applied concurrent triangulation research design. The target population was 22, 279 comprising of 25 principals, 25 deans of curriculum, 1389 tutors and 20, 840 trainees. A sample of 372 was calculated using Yamane's Formula from 22, 279. This comprised of eight principals, eight deans of curriculum, 160 tutors and 196 teacher-trainees. Questionnaires were used to collect data from tutors and trainees whereas interview guides were used to gather information from principals and deans of curriculum. Piloting was conducted amongst 37 respondents (10.0% of the study sample) from PTTCS in Kenya to establish validity, reliability, credibility and dependability. Validity was established by engaging experts. Reliability was determined using the test retest technique. Reliability index, $r = 0.725$, was obtained using Pearson's Product Moment Correlation Method indicating high internal reliability. Credibility was ascertained by involving multiple analysts, whereas dependability was established through detailed reporting of the research process. Data analysis began by identifying common themes from the respondents' description of their experiences. Qualitative data were analyzed thematically along the objectives and presented in narrative forms, whereas quantitative data was analyzed descriptively and inferentially using Chi-Square using Statistical Packages for Social Science (SPSS Version 23) and presented using tables and charts. The study established that instructional resource management do effectively influence teacher trainees' academic performance in public TTCs in Kenya. However, the study concludes that, though the instructional resources are important, they were inadequate to influence on trainees' academic performance in public PTTCS in Kenya. Thus, the study recommends that PTTCS should provide adequate, and durable instructional resource for the teacher-trainees to acquire required knowledge.

Keywords: Instructional Resource Management, Academic performance, teacher-trainees, public teacher training colleges.

INTRODUCTION

Instructional resources refer to didactic material things meant to make learning and teaching possible. Abdullahi (2011) posits that instructional materials are tools made locally or commercialized designed to make enhance the learning process. These include; audiotape; recorder, video tape recorders, projectors, still pictures, programmed instruction, filmstrips, chart, graphs and many others which offer a variety of instructional experiences. In keeping with these assertions, National Tutors Institute (NTI, 2007) defines instructional resources all the resources a tutor

uses to help him/her explain or evaluate the topic, content or subject to the learner so that learner is able to fully comprehend the topic, content or subject. Isola (2010) posits that there are other types of instruction resources which include games, role-playing, demonstrations, experiments, real life situation, real objects and specimens, symbolic and pictorial representation.

These assertions are in line with the views held by Todaro (1992) that, for realization of good performance of tutor-trainees in a tutor training college,

Quick Response Code



Journal homepage:

<http://www.easpublisher.com/easiehl/>

Article History

Received: 15.08.2019

Accepted: 26.08.2019

Published: 04.09.2019

Copyright @ 2019: This is an open-access article distributed under the terms of the Creative Commons Attribution license which permits unrestricted use, distribution, and reproduction in any medium for non commercial use (NonCommercial, or CC-BY-NC) provided the original author and source are credited.

instructional resources must be put in place and used effectively in classroom practice. Florida Department of Education (2007) supports the fact that a well-organized and effective application of media resources in lessons should remove the apathy, compliment available books, arouse tutor trainees' interest through practical teaching and also help them to be creative. However, for teaching to be effective, the tutor must be adequately skilled in planning, design, production, selection, and utilization of relevant instructional resources. Oso (2011) also agreed that the best way for tutors to make use of their manipulative skills is to improvise so as to achieve their lesson objectives at least to a reasonable extent.

To corroborate these viewpoints, Hall (2006) conducted a study in Colombia which revealed that instructional resources should be provided in quality and quantity in schools for effective teaching-learning process. Hall (2006) concluded that material resources have a significant effect on student's achievement since they facilitate the learning of abstract concepts and ideas and discourage rote-learning. Abdu-Raheem and Oluwagbohunmi (2015) assert that resourceful and skillful tutors should improvise necessary instructional materials to promote academic standards in Nigerian schools. Thus, these findings point to the fact that availability of instructional resources enhances the effectiveness of teacher training colleges as these are basic things that can bring about good academic performance amongst the teacher trainees. However, instructional resources are not often available and, if available, not adequate and this has been of serious concern to educators. In Kenya, Abenga (2009) notes that teacher training colleges get instructional resources from the Ministry of Education, parents or sometimes the college purchase some of the vital reference resources especially books for tutors. Abenga (2009) further asserts that it is the responsibility of the individual college administration to ensure the college has adequate instructional resources, utilize them, maintain and repair the worn-out resources. A study conducted in Nairobi County by Okoth *et al* (2002) revealed that public primary teacher training colleges are still using training manual and traditional methods of training. Despite the efforts to supply instructional materials to all public primary tutor training colleges, the supply is inadequate due to high enrolment which was occasioned by free secondary education policy. However, studies have not indicated how mere provision and use of instructional resources improves the quality of education and tutors' content delivery and competency.

Statement of the problem

Importance of instructional resource management on academic performance of teacher-trainees in teacher training colleges cannot be over-emphasized. However, academic performance of teacher-trainees has been dismal and continues to be on

a downward trend. As stated in the background, performance of teacher-trainees in CATs, mock examinations, teaching practice and PTE examinations is very low. Despite the concerted efforts by the Government of Kenya to provide resources to public PTTCs, it is not yet known how those resources are managed to improve teacher-trainees' academic performance, hence the study.

Theoretical Framework

The study was guided by the human capital theory which was postulated by Schultz (1962). This theory is concerned with how people in an organization contribute their knowledge, skills and abilities to enhancing organizational capability and the significance of that contribution. Human capital theory; staff's skills, experience and knowledge will increase the organizational economic value since comprising above the staffs will work efficiency and effectively to achieve organizational outcomes. This theory underscores the fact that instructional resource management is the component of human capital that trainees need to complement tutor's instruction.

Delimitations of the Study

This study was conducted in public primary teacher training colleges in Kenya. In this study, data was collected from principals, dean of curriculum, tutors and teacher-trainees.

The study only focused on the influence of instructional resource management on academic performance of teacher-trainees in public primary teacher training colleges in Kenya. This study applied mixed methods approach and concurrent triangulation research design. Questionnaires were used to collect data from tutors and teacher-trainees, interview guide for principals and Dean of Curriculum.

RESEARCH METHODOLOGY

The study applied mixed methodology and concurrent triangulation design. The study targeted 22,279 respondents comprising of 25 principals, 1389 tutors, 25 deans of curriculum and 20, 840 teacher-trainees. The Yamane's formula was used to sample 372 respondents comprising of eight principals, 160 tutors, eight deans of curriculum and 196 trainees. Stratified sampling was used to create 8 different strata based on the number of former regions (provinces) in Kenya. The researcher sampled 8 principals, 160 tutors, 8 deans of curriculum and 196 teacher-trainees. Questionnaires were used to collect data from tutors and teacher-trainees, interview guide from principals and the deans of curriculum. Qualitative data was analyzed thematically along the study objectives and presented in narrative forms whereas the quantitative data was analyzed using descriptive statistics and inferentially using linear regression analysis with the help of Statistical Package for Social Science (SPSS 23) and presented using tables.

RESULTS AND DISCUSSIONS

In this study, 160-tutors' and 196-teacher-trainees' questionnaires were administered. In return, 156-tutors' and 192-teacher-trainees' questionnaires

were filled and returned. The researcher also conducted interviews amongst eight principals and seven deans of curriculum. This yielded response rates as shown in Table 1;

Table 1: Response Rates

Respondents	Sampled Respondents	Those Who Participated	Achieved Return Rate (%)
Principals	8	8	100.0
Tutors	160	156	97.5
Dean of Curriculum	8	7	87.5
Teacher-Trainees	196	192	98.0
Total	372	363	97.6

From Table 1, principals, tutors, deans of curriculum and teacher-trainees registered a response rate of 97.6%. This confirmed the findings of Creswell (2009) that a response rate above 75.0% is adequate and of suitable levels to allow for generalization of the outcomes to the target population.

Instructional Resource Management and Academic Performance of Trainees in Primary Teacher Training Colleges

The study also sought to examine the influence of instructional resource management on academic performance of trainees in primary teacher training colleges. Descriptive data was collected from tutors and teacher-trainees, organized into specific thoughts and results are shown in Table 2;

Table 2: Views of Tutors and Teacher-Trainees on the Influence of Instructional Resource Management on Academic Performance of Trainees in PTTCs

Test Items	RESP	Ratings				
		SA	A	U	D	SD
		%	%	%	%	%
The utilization of instructional resources is effective during teaching	CT	78.0	11.0	2.5	5.5	3.0
	TT	82.2	9.4	3.3	2.4	2.7
The tutors use varied teaching resources for effective presentation of lessons	CT	69.5	25.5	1.5	2.0	1.5
	TT	70.5	18.4	1.9	4.3	4.9
The scarcity of instructional resources affects training of students	CT	74.5	19.5	1.5	3.2	1.3
	TT	75.2	13.1	2.4	6.1	3.2
Teacher training colleges do not have adequate instructional resources (textbooks, handouts, reference books, charts, atlases etc)	CT	67.5	23.5	2.0	4.0	3.0
	TT	68.3	16.1	4.3	5.6	5.7
Use of resource persons is not a frequent occurrence in the PTTCs	CT	77.5	14.5	1.5	4.0	2.5
	TT	75.2	13.1	2.4	6.1	3.2

Key: RESP-Respondents; CT-Tutors; TR-Teacher-Trainees

Source: Field Data (2018)

Table 2 reveals that majority 122(78.0%CT) and 158(82.2%TT) strongly agreed with the view that the utilization of instructional resources is effective during teaching. 17(11.0%) of the tutors agreed as did 18(9.4%) of the teacher-trainees. 4(2.5%) of the tutors as well as 6(3.3%) of teacher-trainees were undecided, 9(5.5%) of tutors as did 5(2.4%) of the teacher-trainees disagreed whereas 5(3.0%) of tutors and 5(2.7%) of the teacher-trainees strongly disagreed. The study revealed that a fair majority of the respondents 108(69.5%CT) and 135(70.5%TT) strongly agreed with the view that the tutors use varied teaching resources for effective presentation of lessons. 40(25.5%) of the tutors as did 35(18.4%) of the teacher-trainees agreed. 2(1.5%) of tutors and 4(1.9%) of the teacher-trainees were undecided, 3(2.0%) of tutors and 8(4.3%) of the teacher-trainees disagreed whereas 2(1.5%) of the teacher-trainees as did 9(4.9%) of the teacher-trainees strongly disagreed. These findings are inconsistent with

the assertions of Isola (2010) who view instructional resources as objects or devices, which help the tutor to make a lesson much clearer to the tutor-trainee. Thus, these findings affirm the fact that student performance is affected by the quality and quantity of teaching and learning materials. In other words, instructional resources help the tutor to communicate particular kinds of learning. Majority, 116(74.5%CT) and 144(75.2%TT) strongly agreed with the view that the scarcity of instructional resources affects training of students. 30(19.5%) of the tutors as did 25(13.1%) of the teacher-trainees agreed. 2(1.5%) of tutors and 5(2.4%) of the teacher-trainees were undecided, 5(3.2%) of tutors and 12(6.1%) of the teacher-trainees disagreed whereas 2(1.3%) of the tutors as did 6(3.2%) of the teacher-trainees strongly disagreed.

Majority, 105(67.5%CT) and 131(68.3%TT) strongly agreed with the view that teacher training colleges do not have adequate instructional resources (textbooks, handouts, reference books, charts, atlases etc.). 37(23.5%) of the tutors and 31(16.1%) of the teacher-trainees agreed. On the same breath, 3(2.0%) of the tutors and 8(4.3%) of teacher-trainees were undecided, 6(4.0%) of tutors and 11(5.6%) of the teacher-trainees disagreed whereas 5(3.0%) of the tutors as did 11(5.7%) of the teacher-trainees strongly disagreed. These findings corroborate the assertions of Baker *et al* (2002) that such low performance is occasioned by factors such inadequate qualified tutors, pedagogical approaches and insufficient instructional aids and poor use of teaching and learning resources. However, for teaching to be effective, the tutor must be adequately skilled in planning, design, production, selection, and utilization of relevant instructional resources.

Majority, 121(77.5%CT) and 144(75.2%TT) strongly agreed with the view that use of resource persons is not a frequent occurrence in the PTTCs. 23(14.5%) of the tutors and 25(13.1%) of the teacher-

trainees agreed. 2(1.5%) of the tutors and 5(2.4%) of teacher-trainees were undecided, 6(4.0%) of tutors and 12(6.1%) of the teacher-trainees disagreed whereas 4(2.5%) of the tutors as did 6(3.2%) of the teacher-trainees strongly disagreed. These findings support the findings of a study conducted in the Local Government Area of Kwara State, Ilorin, by Moronfolo (2010) which revealed that tutor trainees’ achievements in each of the selected subjects depend largely on the amount of resources available for the teaching of the subjects. This indicates that a critical impact of material resources on the tutor trainees’ academic performance in these subjects.

Inferential Findings on the Influence of Instructional Resource Management on Academic Performance of Trainees in Primary Teacher Training Colleges

To ascertain the relationship between instructional resource management and trainees’ academic performance in primary TTCs, data were collected on trainee/book ratio and trainees’ performance in PTE examinations from 2011-2015. Results are shown in Table 3:

Table 3: Results of Trainee/Book Ratio and Teacher-Trainees’ Performance in PTE from 2011-2015

Trainee/Book Ratio	Average PTE Results in Percentages From 2011-1015
5	33
7	36
9	65
11	68
13	71
14	73
16	74
17	77

Source: Field Data (2018)

Table 3 indicates that public primary teacher training colleges which have more instructional resources such as textbooks for their teacher-trainees register impressive academic grades in PTE examinations. These findings also corroborate the assertions of Baker *et al* (2002) that low performance is

occasioned by factors such inadequate tutors and insufficient instructional aids and poor use of teaching and learning resources. These results were subjected to linear regression analysis and results are shown in Table 4:

Table 4: Linear Regression Analysis Showing Relationship Between Trainee/Book Ratio and Teacher-Trainees’ Performance in PTE Examinations from 2011-2015

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	19.674	8.662		2.271	.064
	Trainee/Book Ratio	3.691	.711	.904	5.189	.002

a. Dependent Variable: PTE Results

Source: SPSS Generated (2018)

From the Linear Regression Statistics in Table 4 generated a linear model of the form; **PTE Results = 19.674 + 3.691Trainne/Book Ratio** with a corresponding significance level of 0.002 which shows that the data is ideal for making a conclusion on the population’s parameter. The significance value

generated was less than 5%, that is, p-value=0.002<0.05. This implies that for every increase in the number of books for trainees, the PTE results are expected to increase by 3.691 marks. This points to the fact that the results were statistically significant and that there is significant relationship between instructional

resource management and academic performance of teacher-trainees in PTE examinations. These results were consistent with the findings of a study conducted by Katu (2011) which generated a p-value of $0.029 < 0.05$. Thus, these findings thus affirm the fact that instructional materials are tools made locally or commercialized designed to enhance learning process.

Thematic Analysis of Qualitative Findings on the Influence of Instructional Resource Management on Academic Performance of Trainees in PTTCs

During the interviews, the principals and deans of curriculum admitted that utilization of instructional resources is effective in teacher training colleges to improve trainees' mock, mid-course and PTE results. They also responded in favor of the view that the tutors use varied teaching resources for effective presentation of lessons in order to enhance trainees' performance in mocks, mid-course and PTE examinations. These views also attest to the fact that trainees' academic performance in mocks, mid-course and PTE examinations is affected by the quality and quantity of teaching and learning materials. Principal, P1, further remarked;

Due to financial constraints, my TTC has had great challenges providing relevant, appropriate and modern instructional materials or any form of scholastic materials. This scarcity of instructional resources affects training of students and thus register low performance in mocks, mid-course and PTE examinations (P1, Male, Med, March, 2015).

Deans of curriculum also admitted that most of PTTCs lack adequate instructional to enhance effective pedagogical processes. when probed further, dean of curriculum, DOC1, remarked;

In our PTTC, we do not have adequate instructional resources such as textbooks, handouts, reference books, charts and atlases amongst others (DOC1, Female, Med, March, 2015).

These views point to the fact that the components of instructional resources available to tutors and tutor-trainees are in large numbers and also vary according to the functions and their qualities such as pictures, graphics, maps and radio-recording, the equipment used to get some of these utilized can be regarded as visual, audio visual aids or instruction aids. Principals and deans of curriculum, however, discounted the view that use of resource persons is not a frequent occurrence in the PTTCs as a way of boosting trainees' mock, mid-course and PTE results. Principals, P2, and dean of curriculum, DOC2, noted,

We always invite resource persons to address our trainees on the importance of hardwork. This usually happens during orientation of new trainees, end of every term, mid-term and end of year and this initiative has been effective in helping teacher-trainees to improve their academic performance in mocks, mid-course and PTE examinations (P2, Male, Med, March, 2015).

These views indicate that the best way for tutors to make use of their manipulative skills is to improvise so as to achieve their lesson objectives at least to a reasonable extent. In other words, instructional resources enhance the effectiveness of teacher training colleges as these are basic things that can bring about good academic performance among the teacher-trainees.

SUMMARY OF FINDINGS

From the study findings, instructional resource management on academic performance of teacher-trainees, the study established that instructional resources effectively enhance teacher training colleges to improve trainees' mock, mid-course and PTE results. This is indicative of the fact that tutors use varied teaching resources for effective presentation of lessons in order to enhance trainees' performance in mocks, mid-course and PTE examinations. However, due to financial constraints, PTTCs have had great challenges providing relevant, appropriate and modern instructional materials or any form of scholastic materials. Scarcity of instructional resources affects training of students and thus register low performance in mocks, mid-course and PTE examinations.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that components of instructional resources available to college tutors and college tutor-trainees are in large numbers and also vary according to the functions and their qualities such as pictures, graphics, maps and radio-recording, the equipment used to get some of these utilized can be regarded as instruction aids. The study also concludes that use of resource persons is not a frequent occurrence in the PTTCs as a way of boosting trainees' mock, mid-course and PTE results. The study recommends that TTCs should provide adequate, and durable instructional resource for the teacher-trainees to acquire required knowledge. The study further recommends that TTCs should effectively disburse the allocated budget on buying scholastic materials (text books, chalk and reference books) for learning, repairs and maintenance supported regularly, maintenance of class rooms (space, board, erasers, chairs, teacher's table, audio-visual aids administrative, academic, school canteen, Laboratories, Resource halls) in time, maintenance of school transport (Buses, truck, van), and buying school stationeries per term.

REFERENCES

1. Abdullahi, A. (2011). *Science Teaching in Nigeria*, Ilorin: Atoto Press.
2. Abdu-Raheem, B. & Oluwagbohunmi, M. (2015). Pre-service teachers' problems of improvisation of instructional materials in social studies in Ekiti State University. *Journal of Education and Practice*, 6(3), 160-163.
3. Abenga, F. (2009). *Organizing Resources for Effective Teaching of Social Studies in Nigeria Schools*, College of Education, Katsina – Ala.
4. Baker, D. P., Goesling, B., & Letendre, G. K. (2002). Socioeconomic Status, School Quality, and National Economic Development: A Cross-National Analysis of the "Heyneman-Loxley Effect" on Mathematics and Science Achievement. *Comparative Education Review*, 46(3), 291-31
5. Creswell, J. (2009). *Research design: qualitative, quantitative and mixed methods approach*. Thousand Oaks, California: Sage Publications.
6. Isola, O.M. (2010). *Effects of Standardized and Improvised Instructional Materials Students' Academic Achievements in Secondary School Physics*. M. Ed Thesis, University of Ibadan, Ibadan.
7. Moronfolo, B. (2010). *Effects of Instruction Resources on the Academic Achievements of Secondary School Students in Ilorin Local Government of Kwara State*. Unpublished M.Ed Research Thesis.
8. NTI (2007). *Teacher Certificate Course Book on Education. Module 5 – 8* Kaduna Nigeria.
9. Okoth, O., Duncan, M., & Jane, N. (2002). *Reflections on Theories and Methods in Oral Literature*. KOLA: Nairobi, 1992.
10. Oso, L. (2011). *Need for improvisation in classroom teaching*. The Punch, June 20
11. Schultz, T. (1962). *Investment in human capital*. *AER*, 51: 1–17.
12. Todaro, M. P. (1992). *Economics for a developing world: An introduction to principles, problems and policies for development* (2nd ed.). Burnt Mill, UK: Longman Group Ltd.