

## A CRITICAL REVIEW OF ASSESSMENT TECHNIQUES USED DURING TEACHER TRAINING IN HOME SCIENCE EDUCATION IN KENYA

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### ABSTRACT

The aim of Kenyan Primary Teacher Education (PTE) is to produce teachers who have relevant knowledge, skills, values, attitudes, and the ability to identify and deliver the curriculum needs of primary school learners. With the reintroduction of Home Science to the primary school curriculum, it is important that Home Science lecturers in Primary Teacher Training Colleges (PTTCs) utilize the best principles of assessment to ensure graduates acquire relevant competencies for employment as primary school teachers. This study sought teacher trainees' perceptions of the assessment techniques used by Home Science lecturers during training and the effect this has on achievement of objectives of Home Science Education. A quantitative research approach underpinned in the post-positivist research paradigm was used in the study. A total of 348 teacher trainees from PTTCs spread all over Kenya took part in the study. Questionnaires were used to collect data on assessment techniques used by Home Science lecturers, their suitability for training, and the extent to which they affect the achievement of objectives of Home Science Education. Results indicated that end-term examinations, continuous assessment tests (CATs), oral questions, quizzes, use of group reports, practical work, project work, and field trip reports were popular assessment techniques amongst Home Science lecturers in that order. The regression analysis result of ( $\beta_1=0.342$ ,  $p=0.000$ ) at 95% confidence level showed a significant relationship between assessment techniques used by Home Science lecturers and achievement of course objectives by teacher trainees. Based on the analysis, end-term examinations were the most often used assessment techniques amongst Home Science lecturers. End-term examinations comprise a theory paper which only examines teachers'

mastery of content besides the acquisition of relevant skills. Kenya is in the process of reforming its education system; hence these results will be used to inform future decisions made regarding instructional assessment during teacher training. It is recommended that Home Science lecturers embrace the use of both theory and practical-based assessment techniques to ensure that teacher trainees acquire relevant knowledge, skills, values, and attitudes upon graduation. This will help curb the current culture of studying to pass written examinations and, instead, promote understanding and acquisition of the relevant Home Science competences.

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## INTRODUCTION

Teacher training refers to the policies and procedures designed to equip prospective teachers with knowledge, skills, attitudes, and values they require to be successful teachers (Kafu 2014; Lolelea 2011; Mwaka, Nabwire & Musamas 2014; Mwangi 2012). Mwaniki (2006) argues that teacher training is crucial to ensure maintenance of the quality and relevance of education. Therefore, for education to be of good quality, the standards of teacher training must be effectively maintained.

Primary Teacher Education (PTE) in Kenya is a two-year course admitting teacher trainees with a minimum mean grade of C plain (equivalent to a 50% score) in the Kenya Certificate for Secondary Education (KCSE). Graduates are then awarded a Primary (1) Teacher Education Certificate (Kenya Institute of Education (KIE) 2004). However, this is bound to change since Kenya is reviewing its education system from the current 8-4-4 (8 years primary, 4 years secondary and 4 years university) to 2-6-6-3 (2 years pre-primary, 6 years primary, 6 years secondary and 3 years tertiary and university) (Kenya Institute of Curriculum Development (KICD) 2017), which will also impact on teacher training. Primary Teacher Education will change from the current 2-year PTE certificate course to a 3-year diploma course. The entry requirement remains a C plain (KICD 2017).

Assessment in PTE takes three forms: continuous assessment, a final written examination, and assessment of teaching practice carried out in primary schools around the country (KIE 2004). Continuous assessment entails the regular CATs done every term; the written mid-course examination taken at the end of first year and the written mock examination taken during the second term of the second year just before the final written examination taken during the final term of the second year of study. Teaching practice sessions last a period of three weeks and teaching practice assessment is carried out three times. The first is during the first year then, at the beginning of second year with the third and final assessment carried out towards the end of second year by external

assessors from the Ministry of Education assisted by some internal lecturers.

During teaching practice assessment, assessors visit the various primary schools in the country where practicing teacher trainees are placed. The assessment is carried out using a standardized assessment form. Apart from assessing teaching skills, assessors also examine trainees' class management and control skills, grooming and confidence aspects, and communication and time management skills (KIE 2004). This has helped in safeguarding validity and reliability of assessment as used during teaching practice; an important aspect in promoting quality in the assessment process.

Home Science lecturers use assessment techniques as recommended in the PTE curriculum for instructional assessment. The recommended techniques include the use of quizzes, group reports, field trip reports, project work, end-term examinations, practical work, and oral and written questions (KIE 2004). Lecturers are however free to use the most appropriate techniques applicable in their varied situations. It is expected that assessment techniques chosen during training should lead to achievement of course objectives and demands in the world of work (Abithun 2019; Yan 2015).

Home Science is classified as a Science subject in the PTE curriculum. It has six main objectives outlined in the curriculum. These entails helping teacher trainees to; appreciate the importance of Home Science to the primary school child, transfer Home Science knowledge and skills to children, improvise materials and formulate realistic strategies for solving problems in life, adapt to new situations and changes in society, improve the standards of living of self, the family and community and use the acquired basic principles and skills as a function for further learning (KIE 2004).

Course objectives are expected to produce competent teachers (Kristen & Lori 2014). Graduates of Home Science Education should therefore be adequately equipped with professional teaching skills to enable them pass relevant competencies to primary school

learners. Therefore, this study sought to establish teacher trainees' perceptions of the assessment techniques used by Home Science lecturers during teacher training and the effect this has on the achievement of objectives of Home Science Education. The key questions for the study were:

- a) Which assessment techniques were most often used by Home Science lecturers in PTTCs?
- b) How suitable were these assessment techniques for teacher training?
- c) To what extent were the objectives of Home Science Education being achieved?
- d) What was the relationship between assessment techniques used by Home Science lecturers and the achievement of objectives of Home Science Education by teacher trainees?

## METHODS

### Participants

This study was guided by the post-positivism research paradigm which allowed careful measurement of the effects of the dependent and independent variables of study (Creswell 2014). A descriptive survey research design was used to collect data for the study. This design was preferred because it allowed examination of relationships amongst study variables (Creswell 2014). Researchers were able to descriptively analyse, predict, and test the significance of the relationship between assessment techniques and achievement of objectives of Home Science Education. Given its expansiveness, the study was embedded in a cross-sectional survey research design.

The study was carried out in 9 out of 30 PTTCs in Kenya that were operational since the last review of the PTE Home Science curriculum in the year 2004. The study used PTTCs because this is where the PTE Home Science curriculum is implemented. The 9 PTTCs were purposively selected to ensure all regions in Kenya were proportionately represented in the study. A total of 348 out of 1,915 teacher trainees in their second year of study participated in the study.

Second-year teacher trainees were involved because Home Science is introduced during the second-year of study in PTE. Six PTTCs were public while three were privately owned although all PTTCs in Kenya implement the same PTE curriculum. Participants were proportionately stratified by type of institution and then by gender.

### Measurement

Paper-based questionnaires with closed-ended questions were used to collect data. Researchers distributed these questionnaires for self-completion by participants, an exercise that lasted 8 weeks. They explained the purpose of the study to participants and assured them of confidentiality for the information provided. Moreover, it was explained that participation in the study was voluntary and anonymous. All questionnaires issued were returned.

Research instruments were divided into four parts; part A sought respondents' demographic information regarding the type of PTTC attended, gender, age, and background in Home Science Education; part B sought respondents' ratings for assessment techniques most often used by Home Science lecturers; part C required respondents to rate the suitability of eight attributes related to assessment technique for use during training while part D required them to rate the extent to which the six objectives of Home Science Education are being achieved.

The research instrument was pre-tested in two randomly-selected PTTCs (1 public and 1 private) and these colleges were not included in the final study. The instrument was tested for validity and reliability. Thirty-five teacher trainees were selected by simple random sampling to participate in the pilot study. The instrument was analyzed and a reliability coefficient of 0.83 derived from responses given using Cronbach's alpha. This value was considered high enough for reliability.

To establish the validity of the items in the research instrument, factor analysis was performed. The analysis was done on the six

objectives of Home Science Education and the eight attributes related to assessment techniques. The six objectives were subjected to Principal Component Analysis (PCA) test. The suitability of data for analysis was assessed first with the inspection of the correlation matrix revealing the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Olkin value of 0.913 exceeded the recommended value of 0.6 (Pallant 2013) and Bartlett's Test of Sphericity reached statistical significance ( $p < 0.000$ ).

Principal Component Analysis revealed the presence of three components with Eigenvalues exceeding 1, explaining 35.8%, 34.0%, and 28.2% of the variance respectively. To aid in the interpretation of these three components, Varimax rotation with Kaiser Normalization was performed. The rotated solution revealed the presence of a simple structure with all three components showing several strong loadings. Three objectives loaded on factor one, two objectives, loaded on factor two while the

**TABLE 1: FACTOR STRUCTURE ON OBJECTIVES OF HOME SCIENCE EDUCATION**

S/NO.	Factor	Loadings	Eigenvalues	Cumulative variance explained (%)
1	Helping to appreciate the importance of Home Science to the primary school child.	0.770	2.148	35.8
2	Enabling the transfer of Home Science knowledge and skills to children	0.657		
3	Enabling improvisation of materials and formulation of realistic strategies for solving problems in life.	0.656		
4	Enabling ability to adapt to new situations and changes in society.	0.738	2.043	69.8
5	Improving the standards of living of self, the family and community.	0.671		
6	Enabling use of basic principles and skills as a function for further learning.	0.783	1.694	98.0
	<b>Kaise-Meyer-Olkin MSA</b> <b>Bartlett's test of sphericity</b>	<b>0.913</b> <b>c<sup>2</sup>=4594.299</b> <b>p&lt;0.000</b>		

(Source: Research Data, 2017)

**TABLE 2: FACTOR STRUCTURE OF ATTRIBUTES RELATED TO ASSESSMENT TECHNIQUES**

S/NO.	Factor	Loadings	Eigenvalues	Cumulative variance explained (%)
1	Results obtained from assessment techniques are used for curriculum improvement	0.927		
2	Assessment techniques test both knowledge and skills	0.925		
3	They relate to curriculum objectives.	0.879		
4	They relate to job market requirements.	0.818	5.343	43.8
5	They are adequate	0.930		
6	Tutors use a variety of them.	0.906		
7	They are valid and reliable.	0.863		
8	Timely feedback on results is communicated to students and PTTCs	0.763	1.515	85.7
	<b>Kaise-Meyer-Olkin MSA</b> <b>Bartlett's test of sphericity</b>	<b>0.851</b> <b>c<sup>2</sup>=3187.646</b> <b>p&lt;0.000</b>		

(Source: Research Data, 2017)

remaining objective loaded on component three. Cumulatively, the three components explained a total of 98% of the variance in objectives of Home Science Education. This meant that the six objectives of Home Science Education were suitable for use in the study as they measured the same aspects of the dependent variable as shown in Table 1.

According to Table 2, eight attributes on assessment techniques structure were also examined for construct validity. Suitability of data for analysis was assessed before inspection of the correlation matrix which revealed the presence of many coefficients of 0.3 and above. The Kaiser-Meyer-Olkin value was 0.851 exceeding the recommended value of 0.6 and Bartlett's Test of Sphericity reached statistical significance ( $p < 0.000$ ), supporting the factorability of the correlation matrix (Pallant 2013).

This scale was subjected to factor analysis with Principal Component Analysis revealing two factors with Eigenvalues greater than one which cumulatively explained 85.7% of the variance. The first factor accounted for 43.8% of total variance with the second factor accounting for 41.9% of the variance in assessment techniques. When rotated using Varimax with Kaiser Normalization, four attributes loaded on factor one while the remaining four attributes loaded on the second component. This meant that the eight attributes were valid for use in measuring the independent variable in the study.

## ANALYSIS

Data collected through questionnaires were processed and analyzed using Microsoft Excel and SPSS 22 for Windows. Both descriptive and inferential statistics were used for data analysis. Descriptive statistics of frequency counts and percentages were used to measure respondents' perceptions towards extent of achievement of objectives of Home Science Education and suitability of recommended assessment techniques for teacher training while the null hypothesis was tested using

simple regression analysis at 0.05 significance level.

The process involved editing, coding, entry, scoring, transforming, and analysis. Besides demographic information, items in part B, C, and D of the questionnaires were rated against a 5-point Likert scale of 'Very frequent', 'Frequent', 'Sometimes', 'Rarely' and 'Never' for part A (Table 3); 'Strongly agree', 'Agree', 'Undecided', 'Disagree' and 'Strongly disagree' for part B (Table 4), and 'Very great extent', 'Great extent', 'Undecided', 'Small extent' and 'Very small extent' for part C (Table 5).

## RESULTS

The study investigated the most often used assessment techniques by Home Science lecturers, their suitability for teacher training, the extent to which objectives of Home Science Education are being achieved, and the relationship between assessment techniques and achievement of the objectives of Home Science Education by teacher trainees.

### Respondents' demographic characteristics

Respondents were required to give background information regarding the PTTC attended, gender, age, and background knowledge in Home Science Education. Out of the total 348 teacher trainees that participated in the study, 176(50.6%) were male and 172(49.4%) female. Two hundred and fifty-five (73.3%) came from public PTTCs while 93(26.7%) were from private PTTCs. There was no significant relationship between respondents' gender and the type of PTTCs attended ( $\chi^2 = 0.399$ ;  $p = 0.437$  at  $p < 0.05$ ). This, therefore, meant that the gender and type of PTTC respondents came from had no influence on the responses they gave. On age distribution, 199(57.2%) were aged below 20 years, 117(33.6%) between 21 and 30 years, and 32(9.2%) above 30 years. Teacher trainees join PTTCs after secondary school education which is estimated at 18 years. Thus, the reason a majority of them were aged below 20 years. On whether respondents had studied Home Science before joining PTTCs, only 42(12.1%)

said yes while the majority, 306(87.9%) said they first came across Home Science subject at the PTTCs.

### **Respondents' perceptions of frequency of assessment techniques used by Home Science lecturers**

According to results presented in Table 3, the use of practical work to assess teacher trainees was an infrequent technique to a total of 32.5% of the respondents with 19% of them agreeing that this technique was only used sometimes. Further, 17.2% respondents opined that Home Science lecturers rarely used project work to assess them. On the contrary, a total of 81.9% (60.3% very frequently and 21.6% frequently) of the respondents agreed that oral questions were most often used for trainees' assessment by Home Science lecturers. Other most preferred assessment techniques included the use of written tests (81.3%), quizzes (84.2%), and end-term examinations (87.3%).

### **Respondents' perceptions of the suitability of assessment techniques used in Home Science Education**

About 51.8% of teacher trainees were in agreement that assessment techniques used to measure their performance were adequate in that Home Science lecturers used suitable techniques when teaching. However, 55.5% disagreed that assessment techniques relate to job market requirements. Further, 27.0% were undecided whether feedback about results was communicated to teacher trainees and PTTCs on time while 48.9% believed that assessment techniques used were neither valid nor reliable as shown in Table 4

### **Respondents' perceptions of the achievement of objectives of Home Science Education**

As shown in Table 5, respondents agreed that the objective 'helps to appreciate the importance of Home Science to the primary school child' was achieved to a large extent (59.8%) while 42.8% believed that the objective 'enables the ability to adapt to new situations and changes in

society' was being achieved only to a small extent. Further, 56.1% felt that the objective 'improves the standards of living of self, the family and community' was largely achieved while another 10.6% of teacher trainees were undecided on the fact that Home Science education 'enables the use of basic principles and skills as a function for further learning'. In general, respondents agreed that four out of six course objectives were being largely achieved.

The study hypothesized that assessment techniques used by Home Science lecturers did not significantly affect the extent to which course objectives are being achieved. Based on simple regression analysis, the result  $\beta=0.342$ ,  $p=0.000$  revealed a significant relationship between assessment techniques and achievement of objectives of Home Science Education. This result confirmed that assessment techniques used by Home Science lecturers were adequate (51.4%). However, these techniques did not relate to job market requirements (57.5%) or objectives of the PTE Home Science curriculum (49.1%). Further, assessment techniques did not test both knowledge and skills (44.8%) implying that assessment only encouraged rote learning other than the acquisition of relevant competencies. Moreover, feedback on results was rarely communicated to teacher trainees and PTTCs on time (47.1%) thus it was not possible for teacher trainees to use them to improve their performance.

## **DISCUSSION**

Background knowledge of a subject is believed to influence learners' interest and mastery of the content being taught (Mwangi 2007). Study results indicate that a majority of respondents lacked background knowledge in Home Science Education similar to findings by Mumbi (2012). This implies that Home Science subject is introduced to most of the teacher trainees during PTE. Given that the subject is offered during the second and final year of training in the PTE curriculum, there is only one year available for curriculum coverage, a duration likely to hamper effective curriculum delivery and assessment.

**TABLE 3: RESPONDENTS' RATINGS FOR FREQUENCY IN THE USE OF ASSESSMENT TECHNIQUES**

S/NO	Assessment Techniques	VF	F	S	R	N	Total
1	Practical work	73 (21.0%)	51 (14.7%)	66 (19.0%)	45 (12.9%)	113 (32.5%)	348 (100%)
2	Project work	67 (19.3%)	59 (17.0%)	47 (14.1%)	60 (17.2%)	113 (32.5%)	348 (100%)
3	Field trip reports	17 4.9%	57 (16.4%)	24 (6.9%)	89 (25.6%)	161 (46.3%)	348 (100%)
4	Oral questions	210 (60.3%)	75 (21.6%)	32 (9.2%)	17 (4.9%)	14 (4.0%)	348 (100%)
5	Quizzes	168 (48.3%)	125 (35.9%)	18 (5.2%)	30 (8.6%)	7 (2.0%)	348 (100%)
6	Group reports	66 (19.0%)	74 (21.3%)	76 (21.8%)	57 (16.4%)	75 (21.6%)	348 (100%)
7	Written tests	166 (47.7%)	117 (33.6%)	33 (9.5%)	21 (6.0%)	11 (3.2%)	348 (100%)
8	End term examinations	212 (60.9%)	92 (26.4%)	21 (6.0%)	18 (5.2%)	5 (1.4%)	348 (100%)

VF – Very Frequently; F – Frequently; S – Sometimes; R – Rarely; N - Never  
(Source: Research Data, 2017)

**TABLE 4: RESPONDENTS' RATINGS FOR FREQUENCY IN THE USE OF ASSESSMENT TECHNIQUES**

S/NO.	Attributes on assessment techniques	SA	A	UD	D	SD	Total
1	Assessment techniques used by tutors are adequate.	83 23.9%	97 27.9%	36 10.3%	58 16.7%	74 21.3%	348 100%
2	Tutors use a variety of them.	102 29.3%	70 20.1%	48 13.8%	71 20.4%	57 16.4%	348 100%
3	They relate to job market requirements.	44 12.6%	58 16.7%	53 15.2%	87 25.0%	106 30.5%	348 100%
4	They relate to curriculum objectives.	61 17.5%	66 19.0%	50 14.4%	89 25.6%	82 23.6%	348 100%
5	They are valid and reliable.	46 13.2%	52 14.9%	80 23.0%	87 25.0%	83 23.9%	348 100%
6	They test both knowledge and skills.	86 24.7%	81 23.3%	25 7.2%	83 23.9%	73 21.0%	348 100%
7	Timely feedback on results is communicated to students and PTTCs.	47 13.5%	43 12.4%	94 27.0%	61 17.5%	103 29.6%	348 100%
8	Results obtained are used for curriculum improvement.	83 24.9%	81 23.3%	25 7.2%	84 24.1%	75 22.6%	348 100%

SA – Strongly Agree; A - Agree; UD – Undecided; D – Disagree; SD – Strongly Disagree  
(Source: Research Data, 2017)

With the subject being practical-based, inadequate time for curriculum delivery would mean that lecturers teach most concepts theoretically other than opting for the practical approach which would otherwise consume more time. In the end, lecturers will assess trainees' theoretically and pay little or no attention to the acquisition of practical skills. This explains the result that end-term examinations, which are mainly theory-based, are most often used by

Home Science lecturers while techniques like use of group reports, practical work, project work, and field trips are either rarely or never used. It is encouraging that Kenya has reintroduced Home Science subject in the primary school curriculum because all trainees will now have basic knowledge from their own school experience, thus improving their mastery of content later. This result is similar to KIE summative evaluation reports (KIE, 2011a and

**TABLE 5: RESPONDENTS' RATINGS ON THE ACHIEVEMENT OF HOME SCIENCE EDUCATION OBJECTIVES**

S/NO.	Objectives of Home Science Education	% Distribution of responses					Total
		VGE	GE	UD	SE	VSE	
1	Helps to appreciate the importance of Home Science to the primary school child.	135 38.8%	73 21.0%	48 13.8%	59 17.0%	33 9.5%	348 100%
2	Enables the transfer of Home Science knowledge and skills to children	94 27.0%	61 17.5%	54 15.5%	121 34.8%	18 5.2%	348 100%
3	Enables improvisation of materials and formulation of realistic strategies for solving problems in life.	89 25.6%	92 26.4%	45 12.9%	67 19.3%	55 15.8%	348 100%
4	Enables ability to adapt to new situations and changes in society.	94 27.0%	69 19.8%	36 10.3%	81 23.3%	68 19.5%	348 100%
5	Improves the standards of living of self, the family and community.	113 32.5%	82 23.6%	26 7.5%	58 16.7%	69 19.8%	348 100%
6	Enables use of basic principles and skills as a function for further learning.	110 31.6%	87 25.0%	37 10.6%	47 13.5%	67 19.3%	348 100%

VGE – Very Great Extent; GE - Great Extent; UD – Undecided; SE – Small Extent; VSE – Very Small Extent  
(Source: Research Data, 2017)

KIE 2011b) on primary and secondary school curricula respectively, which established that the most widespread method of assessment in Kenyan schools was use of written tests. Kagoda and Ezati (2013) also established that the PTE curriculum in Uganda is examination-oriented thus focus in colleges is for teacher trainees to pass national examinations rather than helping them become quality primary school teachers.

On the suitability of assessment techniques for teacher training, respondents took the view that techniques used by Home Science lecturers were adequate. However, these techniques did not equip them with skills required in the job market thus adversely affecting their employability. This result reaffirms findings by Nyerere (2009) and Wanzala (2013) who reported that PTTCs were not equipping teacher trainees with required competencies thus creating a gap between the labour market and training in learning institutions. Further, the Academy for Educational Development (2008) concluded that the PTE curriculum in Kenya was ineffective in evaluating its students: assessment tested aspects not included in the curriculum as well as testing theoretical understanding mainly with very little being applied to practical work.

Similarly, study results indicated that about half

of the respondents felt that assessment techniques used by Home Science lecturers were neither valid nor reliable and that lecturers most often used techniques that promoted content mastery and very little of the acquisition of skills amongst teacher trainees. This result suggests that according to study respondents, teacher trainees' may not have acquired the relevant competencies of Home Science Education upon graduation. As a result, they may not be able to effectively transfer Home Science knowledge and skills to children as primary school teachers (Republic of Kenya (RoK) 2015). Home Science is classified as a prevocational subject (Mumbi 2012) thus its graduates are expected to acquire relevant knowledge, skills, values and attitudes after training. It is therefore important that Home Science lecturers in PTTCs choose assessment techniques that test the acquisition of both knowledge and skills to ensure that they produce primary school teachers who can effectively teach the primary school learner. This will help ensure that Home Science graduates from PTTCs have the requisite competencies that will enable them fit well in the job market.

Kristen *et al.* (2014) recommend that assessment techniques should always link to course objectives. On the extent of achievement of the objectives of Home Science Education, results from the study established that teacher



trainees believed two out of six objectives of Home Science Education were being achieved to a lesser extent implying that course objectives are not being effectively achieved. To ensure that all objectives are successfully achieved, lecturers should be guided by course objectives when planning for assessment techniques to use (Otunga 2015) during training. Focus should be, to test all competencies as envisioned in the course objectives which reflect the needs of the job market.

On the relationship between assessment techniques and achievement of course objectives, results indicated that assessment techniques used by Home Science lecturers during teacher training significantly influenced achievement of course objectives. However, the extent of achievement could be increased if lecturers ensured that assessment techniques used relate to job market requirements (Abatihun 2019) and course objectives (Kristen *et al.* 2014). They should also ensure techniques are valid and reliable and that they test for all relevant competencies other than only testing for content mastery. Further, feedback from results should be communicated to teacher trainees and PTTCs on time for use in improving performance.

## CONCLUSIONS

The majority of teacher trainees in this study of Home Science Education get to study the subject for the first time at their PTTCs. Home Science is introduced during the second year of study in PTE implying that lecturers have only one year to cover all content in the curriculum. This therefore means that the quality of assessment is bound to get compromised. Most lecturers opt for theory rather than practical-based assessment techniques hence the popularity of end-term examinations, which are mainly theory-based, amongst Home Science lecturers.

Based on the most often used assessment techniques by lecturers, the PTE Home Science curriculum is perceived to be examination-oriented implying that it focusses on trainees

passing the national examination rather than helping them acquire the relevant competencies of primary school teachers. Lecturers should thus strive to vary the assessment techniques they use so as to ensure that they test all relevant competencies acquired by teacher trainees. They should embrace the use of more practical-based assessment techniques to boost the acquisition of practical skills by teacher trainees. This will ensure that Home Science graduates acquire appropriate skills for the job market.

## EDUCATIONAL RECOMMENDATIONS

- 1) From the data analysis, the use of both theory and practical-based assessment techniques to assess teacher trainees in Home Science Education should be encouraged. Home Science lecturers should use assessment techniques that allow trainees to practice skills learned besides recalling learned content. This will enable them to effectively identify and deliver the curriculum needs of the primary school learner.
- 2) The KNEC should examine practical work in PTE examinations. Such emphasis will motivate lecturers to embrace practical-based approaches as important assessment techniques in teacher training.
- 3) Assessment techniques used in Home Science Education should be guided by course objectives. Focus during examinations should be geared towards providing and assessing skills applicable to the job market and not just passing examinations.
- 4) Feedback from examinations should be provided on time so that it can be used to improve trainees' performance.

## REFERENCES

- Abatihun, A. S., 2019, A Study of the Assessment Methods & Experience of Teachers at an Ethiopian University, *International Journal of Instruction*, 12(2), 606-622.
- Academy for Educational Development, 2008, *Third Quarterly Technical Report*. January-April,

Nairobi: TEPD.

Carl, C.J., 2019, A Study of the Implementation of Formative Assessment in Three Large Urban Districts, *American Educational Research Journal*, 56(6), 2408-2438.

Creswell, J. W., 2014, *Research design: Qualitative, quantitative, and mixed methods approach*, Sage, Los Angeles.

Kafu, A. K., 2014, Teacher education and development of quality education in modern Africa, *Journal of African Studies in Educational Management and Leadership*, 4(1), 24-37.

Kagoda, A. M., & Ezati B. A., 2013, Contribution of primary teacher education curriculum to quality primary education in Uganda, *Problems of Education in the 21<sup>st</sup> Century*, 52, 35-47.

Kenya Institute of Education, 2004, *Primary teacher education syllabus*, Kenya Literature Bureau, Nairobi.

Kenya Institute of Education, 2011a, *Ministry of education: summative evaluation of the primary school education curriculum*, Kenya Literature Bureau, Nairobi.

Kenya Institute of Education, 2011b, *Ministry of education: summative evaluation of the secondary school education curriculum*, Kenya Literature Bureau, Nairobi.

Kenya Institute of Curriculum Development, 2017, *The basic education curriculum framework*, Kenya Literature Bureau, Nairobi.

Kristen, D. & Lori, C., 2014, Classroom Assessment Techniques: A Literature Review, *Journal of Instructional Research*, 3, 15-20.

Lolelea, J. N., 2011, Tutors' and student-teachers' perceptions of pre-service program as St. John's Teachers' College in the teaching of primary school curriculum in Thika District, Kenya, Masters' thesis, Catholic University of

Eastern Africa.

Mumbi, M., 2012, A critical study of the teaching Home Science in selected teacher training colleges in Kenya, viewed 07 June, 2012, from URI: <http://ir-library.ku.ac.ke/handle/123456789/4921>.

Mwaka, M., Nabwire, K., & Musamas, J., 2014, *Essentials of Instruction*, Moi University Press, Eldoret.

Mwangi, W. S., 2012, *Beyond quantity: Higher education in Kenya*, viewed 21 November, 2016, from, [http://web.univpau.fr/RECHERCHE/CREPAO/pdf/kampala\\_mwangi.pdf](http://web.univpau.fr/RECHERCHE/CREPAO/pdf/kampala_mwangi.pdf).

Mwaniki, S. M., 2006, Responsiveness of Primary Teacher Education in Kenya to Challenges of the 21<sup>st</sup> Century, PhD thesis, Kenyatta University.

Nyerere, J., 2009, *Technical, industrial & vocational education and training (TVET) sector mapping in Kenya*, Dutch Schokland TVET programme, Nairobi.

Otunga, N. R., 2015, *Dynamism in curriculum and instruction*, Utafiti Foundation, Eldoret.

Pallant, J., 2013, *SPSS survival manual: A step guide to data analysis using SPSS for windows* 5<sup>th</sup> edn, McGraw-Hill, New York.

Republic of Kenya, 2015, *Sessional Paper No.2 of 2015*. Reforming Education and Training in Kenya.

Wanzala W., 2013, Quest for quality and relevant higher education, training and learning in Kenya: An overview, *Education Journal*, 2(2), 36-49.

Yan, Z., Cheng, E. C. K., 2015, Primary teachers' attitudes, intentions and practices regarding formative assessment, *Teaching and Teacher Education*, 45, 128-136.