

The Qualities of Effective Secondary School Teachers and Criteria for Selection of Secondary Teachers in Kenya

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Abstract

The purpose of this study was to develop an instrument for recruitment of teacher trainees from the qualities of effective teachers identified and validated in this study. In Kenya, teacher resource is recognized as the most critical input to the education system. Teachers selection, training and utilization is therefore critical to the quality of learning. However, there is no existing research based criteria of selecting teacher trainees into teacher education programme. A total of 475 participants drawn from secondary schools from Nyanza, Western and Rift valley provinces. Stratified simple random sampling was used to select and recruit these participants. Participants were given questionnaires containing items on the qualities of the effective teachers and were required to give structured responses. The statements contained in the questionnaires were coded and analyzed using exploratory factor analysis. This study revealed that students perceived effective secondary school teachers as those who possessed cognitive, pedagogical, affective, professional, spiritual and counseling qualities. Secondly, a selection criterion for recruitment of teacher trainees into teacher training programmes was developed. This criteria is useful to teacher educators and employers in the recruitment of teacher trainees into teacher education, as well as graduate teachers into teaching profession.

Keywords: Kenya, effective teachers, qualities, criteria, selection secondary, school teachers

INTRODUCTION

Studies have indicated that effective teachers have significant impact on student achievement (Kaplan & Owings, 2002; Clotfelter, Ladd & Vigdor, 2007). Teacher quality standards include a wide range of knowledge, pedagogical skills, abilities and dispositions that contemporary educators believe effective teachers must possess and demonstrate in a classroom (Mitchell, Robinson, Plake & Knowles, 2001). Research has demonstrated that one of the most important factors influencing the quality of teaching is selection (Cochran-Smith 2002). However, in most countries evaluation instruments are not properly constructed, or administered (Toch & Rotman, 2008).

In Germany, teacher recruitment is crucial because teachers are civil servants. Once the administration approves of a teacher's appointment, the teacher is likely to receive tenure. Thus the recruitment procedure is expected to be more thorough (OECD 2004). Teacher recruitment however, raises a theoretical issue concerning the question of teaching as a profession. According to the concept of "profession" members of a full profession are responsible for the training and recruitment of their associates. According to Hoyle (1995) in Germany teacher force does not have control over training and recruitment of teacher thus teaching is viewed as a semi-profession. In Britain, teacher trainees are screened for empathy, understanding and passion to ensure they have qualities of good teachers. In a

speech by former British Prime Minister Gordon Brown recruitment of the best teachers will in future be more than simply a class of degrees but also about empathy, understanding and passion-the intangible qualities that define every great teacher. He said that the piloting of a test to screen potential teachers these was underway. This pilot would involve asking a range of on screen questions about qualities or attributes expected of a teacher such as organization, flexibility and resilience (Hannah Richard British Broadcasting Corporation BBC news education reporter, March 3, 2010). Whereas countries like Finland and Singapore admit top student through a joint selection board into teachers colleges (Kipkorir, 2011). The teacher resource has been recognized in Kenya as one of the most crucial inputs into the education system hence their selection, recruitment, training and utilization is critical to the quality of learning outcomes (Government of Kenya sessional paper No.1, 2002).

That notwithstanding, there is no research based criteria for the recruitment process in Kenya. Teacher recruitment is mainly based on the candidates' academic and professional qualification and length of stay after graduation. Moreover there is no existing criterion of selecting applicants wishing to join teacher education programmes in Kenya. The objective of this study was to construct an inventory for recruitment of teacher trainees from the qualities of effective teachers identified and validated.

STATEMENT OF THE PROBLEM

Research has demonstrated that one of the most important factors influencing the quality of teaching is teacher selection (Cochran-smith 2002). However, in most countries evaluation instruments are not properly constructed, or administered. Toch and Rotman (2008) argue that a well constructed, evaluation instruments can improve teacher effectiveness. However, according to Young and Deli (2002), many researchers in education devote less attention on the validity the instrument of teacher selection.

Toch and Rottman (2008) reported that most countries evaluation instrument/ criteria are not properly constructed or administered. That most of the instruments are too inadequate to improve effectiveness. In Kenya there is no study which has used the identified qualities of effective teachers to develop an instrument which can be used in the selection of teacher trainees. Teachers are trained and recruited to join the profession yet, there is no valid instrument developed through research for this important exercise. To bridge this gap, this study investigated the qualities of effective secondary school teachers, and consequently developed criteria for selection of secondary school teacher trainees.

RESEARCH QUESTION

The following question was answered by the study:

1. Which qualities of effective teachers are acceptable to secondary school students?

RESEARCH METHODS

This study used quantitative method to generate data. The design used in this study was cross-sectional survey. This design was appropriate for this study because this was an exploratory study whose main objective was to identify the qualities of effective secondary in Kenya and consequently construct an instrument for the recruitment of teacher trainees. Survey design enabled the researcher to collect data from a larger sample and to interpret and understand the student's perception on the qualities of effective secondary school teacher. The research population used in this study is described next.

POPULATION AND SAMPLING

The research population included all form three secondary school students in public secondary school in Nyanza, Western and rift valley provinces in Kenya. Participants involved in this study were selected because they had real life experience with teachers of varied competencies and are believed to have accurate and useful information about the teachers.

A sample size of 457 participants (192 females' and 268 males) was used in this study. This sample was

drawn from the national, provincial and district secondary schools in the three provinces.

This study adopted stratified random sampling technique which involved dividing the population into homogeneous groups. In this study secondary schools were categorized into: national, provincial and district secondary schools. Further participants were stratified by gender into female and male then were selected from each category of schools in the three provinces. Participants were selected from each stratum using simple random sampling technique. Simple random sampling technique was used to select participants from each class in each school.

INSTRUMENTATION AND PROCEDURE

This study used a likert-type of questionnaire to collect data. This questionnaire contained a self developed 25 items describing qualities of an effective secondary school teacher. Respondents were required to indicate their feelings towards each item/statements describing the qualities of their most effective teacher on a 5-point likert scale-strongly agree, agree, uncertain, disagree and strongly disagree. They were instructed to put a tick in the box corresponding to these statements. This instrument was designed to obtain students perceptions of the qualities of effective secondary school teachers.

DATA ANALYSIS

This study was conducted to achieve the following objectives: to validate the teacher qualities items and construct an instrument for recruitment of teacher trainees. To determine the construct validity of teacher quality items, the 25 item teacher quality questionnaire was administered to the participants. The responses were coded keyed into a computer data file. Factor analysis was run to determine the validity of the construct validity of the teacher quality questionnaire. Factor analysis is a powerful statistical analysis for determining the construct validity of an instrument (Kline 1998).

FACTOR ANALYTIC TECHNIQUE

Factor analysis is a statistical procedure that reduces a large number of variables into a smaller number of variables and distinct factors by combining variables that are correlated with each other (Gall, Gall & Borg, 2006). Factor represents the underlying construct that summarize or account for the original set of observed variables.

The main purpose of factor analysis is to determine the items which belong together, that is they are answered similarly and measure the same dimension or factor. Factor analysis allows the researcher to examine the interrelationships among variables for example, the interrelationship between qualities of an effective teacher's questionnaire responses, and then explains these variables in terms of their common

dimensions (Carl et al. 2010). Kline (1998) noted that a researcher can identify the separate dimensions being measured by survey and determine factor loading for each survey item on each factor. Factor loadings are the correlation between the items and the factors. High correlation values are indicative of which items belong to a particular factor.

According to Field (2005) over 300 participants can give reliable results. The sample (457) in this study therefore, was large enough to produce reliable results.

PRINCIPAL COMPONENT ANALYSIS

In this study, principal component analysis (PCA) was conducted to determine the number of factors underlying the 25 items identified as measuring the qualities of effective secondary school teachers. The initial statistics that emerged from this analysis contained all factors, Eigen values, percentage of variance accounted by each factor, and the cumulative percentage. The initial statistics is reported in Table 1.

As shown in Table 1, a total of 25 factors accounting for 100 percent of the variance emerged. Out of these 25 factors, six factors had greater than one and were retained for further analysis. Kaiser’s (1960) Eigenvalues greater than one criterion was used to retain six factors, which accounted for 54.4 percent of the total variance. Although six factors had Eigenvalues greater than one, analysis of the initial statistics indicated that there was only one main factor underlying the 25 items in the Teacher Quality

Questionnaire. This was factor one which had of 7.5 and accounted for 30.1 per cent of the total variance. This factor was named “Teacher Quality Factor.”

Table 1: Initial Statistics of Factor Analysis

Factor	Eigen value	% of Variance	Cumulative %
1	7.535	30.141	30.141
2	1.440	5.761	35.902
3	1.344	5.377	41.280
4	1.168	4.671	45.951
5	1.075	4.300	50.251
6	1.048	4.192	54.443
7	.960	3.840	58.283
8	.918	3.672	61.956
9	.841	3.364	65.319
10	.824	3.295	68.615
11	.758	3.031	71.646
12	.727	2.910	74.555
13	.678	2.711	77.267
14	.660	2.638	79.905
15	.633	2.530	82.435
16	.586	2.345	84.780
17	.549	2.198	86.978
18	.519	2.077	89.055
19	.493	1.972	91.027
20	.448	1.793	92.820
21	.420	1.678	94.498
22	.405	1.620	96.118
23	.346	1.382	97.500
24	.332	1.330	98.830
25	.292	1.170	100.000

FACTOR LOADINGS

In the second part of the analysis the loadings of the 25 items on the six factors were considered. A factor loading is the correlation between observed variable or item and the underlying factor. The factor loadings are reported in Table 2.

Table 2: Principal Component

Variables (item)	Factor					
	1	2	3	4	5	6
1. Good sense of humor	.169	.531	-.150	.382	.473	.251
2. knows subject matter	.437	.342	.056	.398	.021	.219
3. Caring and understanding	.595	.345	.033	-.007	-.018	-.113
4. Explains concepts	.645	.223	.103	.056	-.211	-.081
5. Fair to learners	.611	.171	.305	.020	-.115	-.225
6. Marks assignments	.274	-.089	.214	.085	.056	.051
7. Punctual to class	.272	-.219	.435	.160	.323	.191
8. Counseling learners	.556	-.104	-.086	-.333	.334	-.149
9. Patient and respectful	.568	.112	.215	-.006	.085	-.194
10. God fearing	.556	-.1 03	.045	-.064	-.048	-.313
11. Self confident	.516	.137	-.136	.117	-.207	-.128
12. Emotionally stable	.517	.118	.368	-.023	.129	-.187
13. Smart and presentable	.431	-.007	-.194	.236	.062	-.534
14. Willing to help	.678	.037	-.139	-.174	-.126	.183
15. Warm and friendly	.608	.290	-.021	-.310	.048	.009
16. Prepares well	.616	-.152	.135	.081	-.334	.261
17. Involves learners	.586	.097	-.106	-.136	-.180	.317
18. Encourages learners	.523	.121	-.378	-.196	-.063	.213
19. Corrects wrong responses	.596	.017	.009	-.338	-.075	.098
20. Attends lessons	.535	-.363	.434	.106	.000	.169
21. Provides social and career guidance	.567	-.275	-.121	-.258	.335	.022
22. Honest and admits errors	.474	-.183	-.196	-.015	.465	.099
23. Committed to his work	.598	-.293	-.047	.236	-.079	.081
24. Organized	.623	-.310	-.259	.275	-.132	.088
25. Fluent and well spoken	.442	-.271	-.424	.339	-.011	-.194

According to Steven (1992) factor loading of .4 and above is high and should be used in retention of items underlying each factor. The loadings on factor one-teacher-quality-factor were critically examined and items which loaded .4 and above were identified and retained as the items which measured this factor. The analysis showed that 22 out of 25 items loaded greater than .4 on factor one.

RELIABILITY OF THE INSTRUMENT

After the elimination of the three items which did not load high of factor one, the reliability of the 22 item Teacher Quality Questionnaire was determined using Cronbach alpha test. The results of the analysis showed that this instrument had reliability of .89. This indicated that the 22 items within a factor were measuring the same construct and were highly inter-correlated. The 22 items were used in the development of criteria for selection of teacher trainees and selection of teachers joining the teaching profession. This indicated that the items within a factor were measuring the same construct and were highly inter-correlated.

RESULTS

The first objective of this study was to determine the construct validity of the items describing the qualities of effective teachers identified. To establish construct validity in this study, the researcher correlated items in this questionnaire with each other. This questionnaire has latent variable (components) indicators: The teacher affective, cognitive, professional, pedagogical, affective counseling and qualities. To examine whether all indicators of teacher quality questionnaire represented the components and sub-components, validity and reliability test were conducted using Exploratory Factorial Analysis (EFA). Items which loaded on factor 1 - the effective teacher factor at $> .40$ were considered valid, while those which loaded lowly on this factor were eliminated as shown in table 2.

The second objective of this study was to construct an inventory for recruitment of teachers from the qualities of effective teachers identified and validated. As shown in Table 2, this study revealed that the following 22 qualities form criteria for an effective teacher. That is the teacher knows the subject-matter, is caring and understanding, explains concepts, is fair to learners, counsels, is patient and respectful, is God fearing, is self-confident and focused, is emotionally stable, is willing to help learners, warm and friendly, prepares well, involves learners, encourages learners, corrects wrong responses provides social and career guidance, is honest and admits errors, is committed to work, is organized, attends lessons is fluent and well spoken in English language.

DISCUSSION OF RESULTS

This study developed a validated and reliable instrument for the recruitment of candidates into teacher education programmes in Kenya. An observation of the 22 qualities of effective teachers contained in the validated instrument of teacher recruitment indicated that an effective teacher: knows the subject matter well, is caring, explains concepts well, is fair to learners, counsels learners, is patient and respectful to learners, is God fearing, self confident and focused, emotionally stable, is smart and presentable, willing to help learners, prepares lessons well, involves all learners in the lesson, encourages learners to answer questions, corrects wrong responses, attends to all lessons, provides social and career guidance, honest and admits errors, is committed, organized, fluent and well spoken in English, warm and friendly. This study posits that a teacher who possesses all or some of these qualities can be described as being effective.

The findings of this study are consistent with the results of the previous studies on the criteria of effective teachers (Stronge, 2007; Yulianti 2008;). Stronge (2007) listed teachers' affective qualities that relate to effectiveness: enthusiasm, motivation, dedication to teaching and reflective teaching.

Yulianti (2008) identified five components of teacher quality which included: the teacher as a person (personality), classroom management and organization, planning and organizing for instruction, implementing instruction, monitoring student progress and potential. Interestingly a large number of qualities of effective teachers identified and validated in this study were: affective and pedagogical qualities. This verified the continued belief that for teachers to be effective they must possess affective and pedagogical qualities that guide instruction (Stronge (2007).

Wallace, James: Wallace, Wanda (1998) indicated that overall, students are thought to convey perception of teaching abilities; their evaluation is presumed to be statistically reliable, valid and free from general bias. Those who argued for student evaluation as a tool asserts that the students are the consumers of education, thus learning cannot occur if they are not satisfied.

According to the findings of this study therefore, we can say that, the qualities identified in this study should be possessed by candidates before they enter into teacher education programmes, or be developed during training.

CONCLUSION

In conclusion it is recommended that the 22 qualities of an effective teacher reported in this study should be used in identifying and the recruitment of teacher

trainees into teacher education and, trained teachers into the teaching profession. Stakeholders such as teacher educators, quality assurance officers, mentors and policy makers would also find the findings of this study useful because it will help in the teacher preparation, strengthening of evaluation and quality in secondary schools, enhancement of professional development and quality of education system in Kenya.

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