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Towards a cost-effective model for quality supervision of student teachers during teaching practice in public Universities in Kenya

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Introduction

- Teacher education is paramount in the development of a workforce/human resource for the achievement of quality education for sustainable development in Kenya.
- The opportunity to demonstrate the mastery of the competencies provided in the programme comes during Teaching Practice, a resourceintensive exercise
- TP is an integral and most valuable part of teacher education hence a prerequisite.

Background

- In Kenya various institutions are charged with the professional preparation of a specific type of teachers for different levels of education (Shiundu and Omulando, 1992)
- The Bachelor of Education (B. Ed) teachers are prepared by universities in the Schools/Faculties of education in both public and private universities with some slight variations.
- Though universities are autonomous and self-governing institutions responsible for the standards and quality of their academic programmes and awards, most of the TE programmes bear a lot of similarity

Background (cont.)

- Moreover, the competencies required of the accomplished teachers are reflected in the national goals of TE as laid down in various government documents and as outlined by the Ministry of Education (MOE, 1987) which guides the TE curriculum in each institution.
- Universities in Kenya are also guided by the standards and guidelines as set and regulated by the Commission for University Education (CUE, 2013) in the development, implementation, quality assurance and review of academic programmes.

Background (cont.)

- The B. Ed curriculum in all the public universities in Kenya is structured in such a way that both the professional and academic courses are offered concurrently during the period of training.
- The variation in curricula in most public universities in Kenya is mainly in course codes and course titles. However the course content is similar with slight variations.
- In all the institutions, TE has an inbuilt Teaching Practice (TP) session to accord the student teachers an opportunity to translate theory into practice and familiarize themselves with the conditions under which they will work as professional teachers (Shiundu & Omulando, 1992) and demonstrate the mastery of expected competencies.
- This paper focuses on teaching practice which is a prerequisite for TE without which a teacher candidate cannot graduate.

Importance of teaching practice in TE

- TP) being prerequisite for TE is a major component of the curriculum in all public universities in Kenya and is allocated the most unit hours.
- TP in all the institutions is the climax of the course Media Practicals and Micro-Teaching which gives the students an opportunity to practice teaching skills and gain confidence in a micro environment with peers before entering the actual classroom

Importance of teaching practice in TE (cont.)

- Students receive intensive and extensive guidance from their lecturers during micro teaching on how to translate theory into practice through immediate feedback that would help them improve.
- Though modalities may vary from one institution to another based on the available resources and facilities, each institution attempts to prepare its teacher candidates in the best way possible in readiness for the actual classroom

- During TP, all the public institutions in Kenya place their students in practice schools that are deemed suitable to support and provide the required experience in a conducive environment.
- The varied school contexts have been noted to influence the student teachers' performance in terms of grades and the acquisition of the competencies required of a teacher such as preparation for teaching, instructional strategies and instructional procedures among others (Tabot & Nyandusi, 2012).
- Students who practiced in the district schools were noted to experience various debilitating factors which limited the opportunity to translate theory into practice

- Posting of students to schools which may have various debilitating factors is mainly attributed to the economic condition of households in the country and the financial situation in the universities hence most students opt to practice in schools near their home areas, irrespective of the context, to minimise expenditure (Tabot, 2000).
- This may also explain the tendency by the universities to allow such arrangements which explains the countrywide placement of students by most universities though some limit them regions within their proximity.
- The overriding factor though, is the need for the students to familiarise with varied conditions under which they will work as teachers.

- Due to such varied contexts of schools, scattered all over the country, the student teachers need close guidance from the university through regular visits by the supervisors.
- Because this may be quite costly for the respective institutions it has led to inadequate supervision of students on teaching practice (Kasomo, 2012).
- Teaching practice is often the most expensive part of TE because of the costs of travel and subsistence during supervision and assessment.
- Owing to the financial constraints and limited personnel, and increasing number of students, teaching practice in Kenya is facing serious challenges of ensuring quality supervision

The current practices in supervision and assessment of student teachers

- Supervision is a key factor in quality assurance (Kasomo, 2012; Ngara, Ngwarai & Ngara, 2013) in teaching practice. It is a process that enables the student teachers to continuously learn and develop professionally.
- It is a constant and continuous process of personal guidance based on frequent visits to school to give constructive advice so as to improve teaching and learning (Ayodele & Oyewole, 2012).
- The function of supervision; to give professional support and advice (Ondiek, 1978) cannot be over-emphasized.

- The university supervisor's role is that of counsellor and advisor, which comes during the pre and post observation conferences. Supervision however, is most of the time associated with evaluation which creates panic and uneasiness in those being supervised (Otunga, 1986).
- Too many supervisors are obsessed with grading their students rather than helping them (Ondiek, 1978).
- Yet Werner (1995) emphasizes the importance of feedback as it helps the interns analyze what happens in their field experience and more important, generalize to future situations.
- Feedback, he emphasizes, is a vehicle for improving the quality of field experiences and guiding progressively the professional development of pre-service teachers.

• After each observation, notes taken during the observation are shared with the interns and reviewed during the post-observation conference (Ondiek, 1978; Werner, 1995). Werner reiterates that:

"Because the main purpose of these conferences is to promote teacher interns' ability to reflect upon their own teaching and solve their own dilemmas of practice, it is critical to refrain from simply giving praise, criticism or suggestions. Time must be dedicated to having interns verbally analyze their own practice and effects on pupils, generate alternative strategies to use, and commit to self examination and self-improvement" (p.51).

- It is a self-reflection experience which enhances teacher cognitive growth (teachers' thinking about their own acts of teaching) as they construct much of what they learn from their experiences (Schunk, 1996).
- Reflection on and analysis of teaching and learning is an essential component of learning to teach hence one of the goals of supervision.
- Conferences promote self-reflection and this requires quality time and appropriate interaction (Guyton & Byrd, 2000).

- However, given that the supervisor has to travel to another school or back to the university, such sessions would be conducted hurriedly or may not be conducted at all yet student teachers expect an important and positive contribution from both the university supervisors and the cooperating teachers (Al Barwani, 1997 cited by Tabot, 2000).
- University supervisors are also noted to conduct less visits though they gave more significant and meaningful comments.
- Yet research indicates that improvement in teaching competencies is associated with increased feedback through multiple supervisions and regular feedback (Guyton & Byrd, 2000; Tabot, 2000; Ngara, Ngwarai & Ngara, 2013).

- Though in most institutions it is stipulated that student teachers be assessed a minimum of six times (three in each teaching subject), a research conducted at Egerton university cited by Kasomo (2012) revealed that out of the 55 students surveyed, none of them was assessed six or five times. Instead, 28 were assessed three times, 16 twice and two students were assessed once.
- Only a small number of those studied received post supervision discussion of their lessons as required.

- A study by Tabot (2000) in Moi University revealed that most of the assessments fell short of the university recommendations. Only 26(17.6%) student teachers were assessed between five and six times while the majority of 95(64.2%) were assessed between three and four times, and 19 (12.8%) one and two assessments.
- Some students were assessed in only one teaching subject.
- The assessments were not distributed throughout the whole teaching practice period so that some student teachers were assessed in two consecutive days only.
- This was noted by the area supervisors to affect the performance of the student teachers.

- Inadequate assessment was attributed to shortage of supervisors in relation to the high number of student teachers in some zones coupled with the long distances to be covered, with unreliable modes of transport used by the lecturers as well as the limited time available for supervision.
- The many other activities in the TP schools sometimes interrupt the supervision exercise too.
- The countrywide placement of the student teachers necessitates supervisors to travel long distances, more often lecturers from different universities criss-crossing each other from one region to another looking for their students.
- In some instances, assessors from different universities converge in the same school each supervising/assessing one or two students.

- It is based on this premise that this paper proposes 'a Cost Effective (C-E) model' as an alternative in which Universities would collaborate by pooling resources; both financial and human for quality supervision and assessment of student teachers during teaching practice.
- Various scholars and authors cited by Akomolafe and Adegun (2013) define collaboration as process that occurs when a group of autonomous stakeholders engage in an interactive process using shared rules and norms and structures to act on issues related to their domain.
- It is noted as a mutually beneficial relationship entered into to achieve a common goal. It involves information sharing, shared vision, joint planning and complementarily of skills, efforts and roles.

- Collaborative ventures among universities and faculties/schools of education in Kenya is not new and have been noted and encouraged in various areas including and not limited to research, credit transfer and part-time teaching appointments some though without formal agreements and structures and mostly at individual level.
- The later has particularly contributed to quality and cost-effective programmes in upcoming university colleges and campuses.
- It has also been observed that some universities use part-time lecturers in the supervision and assessment of student teachers during teaching practice.

Justification for the Cost Effective Model

- Though teaching practice is a prerequisite to the TE programme in Kenya and the student teachers regard it as the single most important element in their training (Slick, 1995) and valuable irrespective of TP school contexts (Tabot, 2014), its organization has not received the attention it deserves.
- The long distances covered by the lecturers of various universities during supervision and the huge expenses incurred leaves a lot to be desired.
- Students and assessors have complained about inadequate TP materials and little contact time so that the pre-conference and post-conference sessions which are paramount are rarely held (Kasomo, 2012).

Justification (cont.)

- Universities on the other hand grabble with huge expenditures during TP which sometimes eats into other vote heads and sometimes the supervisors are not funded on time
- An attempt to increase teaching practice fee has often been met with resistance from the students leading to unrests mainly due to inadequate household income (MOEST, 2013).
- Worse still, HELP loan for TP would be withdrawn starting with the group of 2014/2015 first year students (HELP, 2015).

Justification (cont.)

- Currently the government is grappling with the crippling wage bill which is stunting the economic growth of the nation (Ruto, 2013) and has raised debate on how it should be dealt with.
- During the recent national wage bill conference (National Day of Dialogue on the Unsustainable Wage Bill held on March 10, 2014), allowances were cited as one of the guzzlers of the exchequer by the President.
- Given that TE has a common aim and the same goals which has resulted in similar curricula implemented by educators with similar qualifications, coupled with the fact that the student teachers are placed in the same regions for practice, it is not logical for lecturers from different universities to criss-cross each other all over the country during supervision.

Justification (cont.)

- Little attention has been focused on the issue of cost and productivity of teaching practice and how the products (student teachers) can be improved relative to the costs.
- This calls for the need for collaboration and partnership among the universities during TP hence the bid for a cost-effective model for quality supervision and assessment of student teachers in public universities in Kenya.

The cost-effective model (C-E)

- The cost-effective (C-E) model proposed in this paper is guided by the Cost Effectiveness Analysis Theory; a technique that is used to determine options that provide the best approach for adoption and practice. It is an efficiency theory in which the inputs used are compared with the outputs achieved (Ngeno, 2011) in order to make good public choices (Woodhall, 2004).
- Woodhall (2004) defines cost-effectiveness analysis as an evaluation tool that is designed to assist in choosing among alternative courses of action or policies when resources are limited.
- As applied by various researchers (Cellini, 2010; Jagero, 2010; Ngeno, 2011), this theory relates costs to specific measures of programme effectiveness whereby a program's cost effectiveness (CE) ratio is obtained by dividing costs by the units of effectiveness.

cost-effective model (C-E) (cont.)

- Measuring cost-effectiveness of supervision of students during teaching practice therefore requires an assessment of essential quality indicators, such as levels of student support provided by the University supervisors, pass rates and assessment practices in relation to the expenditure incurred (DFID,).
- The costs incurred would include direct costs of supervising and assessing students such as travel and daily subsistence allowances (per diem) by the universities as well as indirect costs such as time taken on transit and exhaustion/risks and other foregone tasks and assignments.
- The hypothetical example used in this paper compares only the direct costs incurred in travel and daily subsistence allowances and the number of required assessments per student.

Cost-effectiveness analysis

- Cost effectiveness analysis seeks to identify and place value on the costs of a programme/intervention. It then relates these costs to specific measures of programme effectiveness.
- Cost effectiveness (CE) ratio as used by Ngeno (2011) adopted from Cellini (2010) is obtained by dividing costs by units of effectiveness thus:
- Cost-effectiveness ratio (CER) = <u>Total cost</u>
 Units of effectiveness

Cost-effectiveness analysis (cont.)

- Units of effectiveness are simply a measure of any quantifiable outcome central to the programme's objectives.
- In this study the unit of effectiveness is the number of assessments required of each student by the end of the Teaching practice session.

Illustration of Cost-effectiveness analysis using a hypothetical Teaching Practice situation

- The costs incurred are derived from a hypothetical Teaching Practice situation in Kericho zone which is one of the placement regions for a number of Universities.
- Assuming that there are a total of 16 students in Kericho zone; four from each of the following universities: University A located in Nairobi, University B located in Kisumu, University C located in Eldoret and University D located in Kericho zone.
- It is also assumed that each student is assessed the required six (6) times by the end of the Teaching Practice session
- The direct costs on travel and subsistence for the assessors would be as presented in Table 1 below.

- The example is based on supervisors/assessors at Scale Y using the Salaries and Remuneration Commission (SRC) reviewed daily subsistence allowance (per diem) rate of Ksh 10,500.00 (SRC, 2014) for Kericho region.
- It is also assumed that a lecturer can supervise/assess an average of four (4) students per day taking into consideration the time taken in pre conference, classroom observation, post conference sessions, and travel from one school to another as well as the total number of periods per day on the secondary school timetable.

Table 1: Teaching practice assessment travel and subsistence costs in Ksh per University

| University/Town or | Direct costs for the required 6 assessments per student | | | Total Cost |
|-----------------------------|---|---|--|-------------------|
| City | Per Diem @10,500 per day | Travel to and fro by public means | Travel within the Region@ 2,000.00 per day | |
| University A (Nairobi) | $10,500.00 \times 6$ $= 63,000.00$ | @ 2,400.00 per visit x 6 = 14,400.00 | 2000.00×6 $= 12,000.00$ | 89,400.00 |
| University B (Kisumu) | $10,500.00 \times 6$ $= 63,000.00$ | 4,800.00 | , | 79,800.00 |
| University C (Eldoret) | $10,500.00 \times 6$ $= 63,000.00$ | @ $1,000.00$ per visit $x6 = 6,000.00$ | · · · · · · · · · · · · · · · · · · · | 81,000.00 |
| University D Kericho) Total | $10,500.00 \times 6$ $= 63,000.00$ $252,000.00$ | @ 200.00 per visit x6 = 1,200.00 26,400.00 | , | 76,200.00 |
| Total | 252,000.00 | 26,400.00 | 48,000.00 | 326,400.00 |

- It is evident from Table 1 that the direct costs of supervising/assessing student teachers during teaching practice are higher for Universities which are far from the placement zone.
- University A located in Nairobi would spend the highest at Ksh. 89,400.00 while University D located within Kericho zone would spend Ksh. 76,200.00 which the lowest.

- Based on the above expenses in Table 1, cost effectiveness analysis for assessing student teachers during teaching practice, was derived for each university.
- The Cost Effectiveness Ratio (CER) is derived by dividing the total direct costs of supervising/assessing student teachers by the required number of assessments per student (6) thus:
- CER= <u>Direct costs of supervising/assessing students</u>
 No. of required assessments per student
- Hence the CER for University A for example based on the total costs in Table 1 would be:
- CER = 89,400.00 = Ksh. 14,900.00
- The CER for each of the Universities is as shown in Table 2.

Table 2 Cost effective ratio of supervising student teachers per University

| University/Town or City | CER in Ksh. | |
|-------------------------|-------------|--|
| University A (Nairobi) | 14,900.00 | |
| University B (Kisumu) | 13,300.00 | |
| University C (Eldoret) | 13,500.00 | |
| University D Kericho) | 12,700.00 | |
| Average | 13,650.00 | |

- The most cost-effective program has the lowest CER (White et al, 2004; Levin, 1995).
- In a collaborative model where personnel in the University in proximity to the student teacher placement region are used to assess the student teachers; what is referred to in this paper as the Cost Effective (C-E) model, the expenses would be less.
- It would cost each university Ksh. 12,700.00 to improve the supervision of student teachers to the required six assessments; three assessments per subject.

- Cost effectiveness is an efficiency measure. In order to establish the efficiency of the C-E model, it was necessary to calculate the Efficiency Ratio (ER) using the formula by Cellini (2002) cited by Ngeno (2011) thus:
- Efficiency Ratio (ER)
 - = <u>CER for assessment using C-E model</u> CER for assessment by each University
- If the Efficiency Ratio = 1 then both systems are equally efficient
- If the Efficiency Ratio > 1 then the C-E model (assessment by university within Kericho zone) is less efficient
- If the Efficiency Ratio < 1 then the C-E model (assessment by university within <u>Kericho</u> zone) is more efficient.

• Therefore ER for the three universities outside Kericho zone is as follows:

ER for University
$$A = 12,700.00 = 0.85$$

14,900.00

- ER for University B = 12,700.00 = 0.9513,300.00
- ER for University C = 12,700.00 = 0.9413,500.0
- An efficiency ratio was also calculated based on the average CER when the University within Kericho zone is used to supervise and when each university supervises/assesses their students and the result was as follows:
- Efficiency Ratio (ER) = $\underline{12,700.00} = 0.93$ $\underline{13,650.00}$

- From the above results the Efficiency Ratio (ER) is less than 1.
- It is therefore more efficient for student teachers from all universities to be supervised by lecturers of the university within the proximity of their placement schools.
- The C-E model proposed in this paper for the supervision/assessment of student teachers in public Universities in Kenya is therefore more cost effective and more efficient
- It would lead to prudent use of the scarce resources thus contributing to sustainable development in Kenya.
- Moreover, it would provide adequate time for the lecturers to interact and provide feedback to the student teachers, which is deemed paramount for improvement in the development and sharpening of teaching competencies during practice.
- This, it is envisioned would lead to quality supervision and assessment and consequently quality teachers that Kenya requires for sustainable development.
- Quality teachers would enhance effective and efficient curriculum development and implementation in Kenya.

Expected outcomes of the C-E Model

- Collaboration among the universities would contribute towards **developing standards for teaching practice** and teacher education in general. This may result in policy guidelines not only for teacher education institutions but the placement schools as well.
- The universities may come up with **other cost effective models of supervision** of student teachers such as using the cooperating teachers.
- It would lead to administrative improvements in teaching practice in terms of zoning, posting, supervising and even external examination of student teachers.
- In order to achieve standardization in teaching practice there is need to establish a **professional teacher education centre** which will be charged with the responsibility of developing evaluation and observation instruments and at the same time coordinate the whole exercise of teaching practice in public universities in Kenya and the teaching profession as a whole. This model would provide an opportunity for universities to come up with such a professional teacher education centre in Kenya.

- In the resultant programme design based on this model, the student teachers will be posted to various geographical locations in the country and be assessed by the lecturers from the public university within that locality. The unit cost of travel and subsistence for the assessors will be significantly reduced and at the same time the frequency of assessments and supervision enhanced. In this way quality mentoring and consequently, quality preservice teachers responsive to labour market requirements will be realized.
- The very nature of this collaboration model requires the universities to assume critical role responsibilities. These include selecting experienced supervisors and assessors; providing (and updating) the Faculty of Education in the respective universities with details of the placement and supervision arrangements for student teachers; briefing assessors about the teaching practice programme and distributing assessment materials; arranging orientation sessions for student teachers and assessors; and compiling and submitting the supervision/assessment report (inclusive of the grades for all the student teachers in the zone) at the completion of the teaching practice session. This would enhance commitment to the teaching profession by all the stakeholders thereby improving the quality of the preservice teacher who is able to fit in a dynamic national, regional and international labour market.

- This model will provide an opportunity for the faculty members of education from all the public universities to sit down together in a "think tank" environment hence generating more insight into the improvement of the teaching profession through theory and practice.
- The model will accord the student teachers an opportunity to get the best of both practice and theory with many and varied experienced supervisors from all public universities working together as a single cohesive team and will enable them to interact meaningfully with colleagues from other universities.
- Reduction on costs incurred through travel and subsistence will be realised and consequently the substantial savings made by the respective universities would be used to improve other aspects of the programme such as providing adequate teaching resources to student teachers for practice.

Conclusion

 Teaching practice is prerequisite to the teacher education programme. The importance of supervision during teaching practice cannot be overemphasized. Its contribution to the professional development of the teacher candidate is immense. Being a cost intensive activity, lack of adequate finance has greatly hindered its success and consequently the quality of the teachers. The cost effective model proposed in this paper goes a long way in ameliorating the challenges associated with inadequate funds and inadequate supervision, the purpose of which is to enhance quality supervision and a quality teaching force for sustainable development in Kenya. Insight into other prospects of teacher education and the teaching profession has been raised.

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