

THE PREVAILING STATE OF TEACHING PRACTICE IN TEACHER PREPARATION

Penina Kamina
SUNY Oneonta
peninao@yahoo.com

Moses K. Ochanji
California State
University, San Marcos
mochanji@csusm.edu

Henry O. Ayot
Kenyatta University
hoayotk@yahoo.com

Samson R. Ondigi
Kenyatta University
Ondigi@yahoo.com

This study on teaching practice experience was conducted at a Kenyan University by researchers from both the USA and Kenya, a partnership project, to build capacity through quality teacher preparation. The portion of study presented here used survey techniques and specifically addressed the student teachers' perspectives on the preparation processes, and ability to plan, instruct and use feedback to improve instruction in teaching practice. Stratified sampling of student teachers (n=360) and supervisor (n=240) was used. The student teacher questionnaire covered several educational components such as professionalism, lesson material preparation, content knowledge, teaching performance skills, and reflection based on classroom observation feedback. The major findings were student teachers inability to integrate Information Communication Technology (ICT) in teaching and lack of supportive supervisory feedback.

The study recommends mapping teacher education courses to ensure that ICT and expert feedback are covered before going for teaching practice, by offering coursework on modern accessible ICT, and by facilitating rigorous microteaching experiences. Additionally, train enough supervisors to observe student teachers during teaching practice, put careful consideration in school placements and coordinate posting of student teachers in a timely manner.

Introduction

In teacher preparation, educational accrediting bodies identify specific standards by which teacher performance is evaluated (Ministry of Education, 2013; Council for the Accreditation of Educator Preparation [CAEP], 2013). In Kenya these standards are part of the quality assurance (<http://www.education.go.ke>). One of the required accrediting standard is for the student teacher to intern or practice.

Internship is an important component of any professional training since it provides the opportunity to translate theory into practice (Glickman & Bey, 1990; McIntyre, Byrd, & Fox, 1996). In teacher preparation, the internship is normally in form of student teaching or teaching practice (TP) as it is referred to in Kenya. During TP, the student teacher is obligated to prepare and teach lessons in a classroom setting. At this time, the student teacher is observed and given feedback on lesson planning and teaching by a supervisor. The student teacher's performance is assessed on various skills such as the ability to:

1. Plan instruction based upon knowledge of subject matter, learners, and curriculum goals.
2. Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
3. Provide learning opportunities that support learners' intellectual, social, and personal development.
4. Create instructional opportunities that are adapted to diverse learners.
5. Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.
6. Integrate Information Communication Technology (ICT) in teaching and learning.
7. Create learning experiences that make the subject matter meaningful to learners.

8. Use a variety of instructional strategies to encourage learners' development of critical thinking, problem solving and performance skills.
9. Create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

The student teacher's effectiveness on these skills during TP experience and the quality thereof can be impacted by a variety of factors. Three of the factors, according to Beck (2002) are (a) the quality of preparation courses taken prior to TP experience (b) the supervision and feedback that the student teacher receives during TP, and (c) the relationships that the student teacher develops with other school personnel. Other influencing factors may include how the TP process is managed and its structure (Wyss, Siebert & Dowling, 2012).

Problem and Purpose of the Study

Our research study focused on both pedagogical and structural issues that impact TP but all the work is not discussed in this paper. In this section we highlight some background information related to TP and also state purpose of this article.

Placement of student teachers is a big challenge facing African universities, given the large number to be posted in host schools across broad geographic areas, be it urban, suburban, or rural. In most cases, detrimental stigmas exist regarding placement in rural localities. A study by Mukeredzi and Mandrona (2013) who looked at opportunities and challenges experienced by student teachers posted in the schools within the rural locations unearthed possible reasons for this. First, the student teachers felt that the cooperating teachers "offloaded" their responsibilities to them. Another finding was that, the school administrators often requested student teachers depending on the staffing needs of their schools. This means that a student teacher ends up in a school that does not have expert host teacher in his or her area of concentration. Lastly they found that in understaffed schools, some cooperating teachers are relieved of their duty by the incoming student teachers and do not offer support. The student teachers are left alone with no one to neither monitor their lesson preparations nor guide their instruction.

A second challenge is lack of classroom ICT skills and knowledge. An investigation (Chen, 2009), of technology models that pre-service teachers' use to support instruction found disconnect between learners' technological needs and the teachers' readiness to support them. A study by Udeani and Ejikeme (2011) also points out "inadequate preparation in the use of ICT for teaching... [Yet] ICTs are having a huge impact on everyday classroom activities.... The obvious implication ... is that teacher preparation programs must equip teachers with ICT skills needed for knowledge creation and dissemination" (p. 535). Many African governments recognize the ability to use ICT as being critical to the general society and in job markets. However, little attention is paid on furnishing student teachers with ICT skills since these resources are lacking or inadequate. Clearly the student teacher will not be ready upon graduation to integrate ICT, an essential skill in the 21st century.

A third challenge is large numbers of student teachers. Majority of African universities experience very large enrollments in teacher education programs. In Kenya for example, there has been massive expansion of varied local universities dealing with teacher education program with huge student enrollments, which exert pressures to both human and physical resources and are bound to lower the quality of TP. According to a survey carried out by Kenyatta University researchers in July 2012 as part of the baseline data for the Capacity Building through Teacher Education Project supported by the Higher Education for Development (HED) and USAID, the number of universities offering education degrees has increased from four national universities (Kenyatta University, University of Nairobi, Moi University and Egerton University) to thirty-six universities and constituent colleges (without counting private universities) in the last 10 years. An overwhelming 800% increase of student

teachers with minimal increment in school placements or enough experienced supervisors to go around! These large enrollments lead to compromised excellence and expectations. Debriefing and discussion of feedback of observed lessons by the supervisors has become a rare feature of TP given that a supervisor has to observe many student teachers that also happen to be in different schools that are not of close proximity to each other. This forces the supervisor to exit quickly to supervise other student teachers without providing the appropriate support to the already observed student teacher.

Supervision is another factor impinging on the quality of TP. The current state of affairs shows that there are not enough instructors with expertise and skills to carry out effective TP supervisory roles. The new universities and university colleges have to share supervisors who originally were very able to handle fewer student teachers in the four national universities. Special content areas like foreign language have even less supervisors' forcing them to travel long distances to offer their expert feedback to student teachers. Consequently, the number of classroom observations given to each student teacher is minimal. For example, in 2011, Kenyatta University sent 2975 students for teaching practice. This is an insurmountable number of student teachers to be supervised by the limited number of supervisors. The data for these student teachers completing the TP exercise showed that while they were supposed to be observed and assessed a minimum of six times during the teaching practice, they were only supervised once or twice.

Beyond technological resources, inadequate preparation in ICT knowledge and skills, quality of supervision, there are a myriad of structural challenges that affect the quality of TP – the logistics, the large enrollments, placement and the infrastructure or financing of the TP exercise. These problems need considerations for the quality of TP to improve.

In this paper we only dwell on the pedagogical TP issues regarding (a) how the student teacher felt prepared, (b) was able to apply theories learned in a classroom situation and (c) perceived usefulness of feedback provided by the cooperating teacher, head of department, and the university supervisors.

Research Questions

1. To what extent does the teacher preparation program equip student teachers for their teaching performance expectations?
2. How adequately were the student teachers prepared to employ the learned abilities and skills when delivering content in the classroom?
3. To what extent did student teachers value the feedback given to them by the mentor teachers, school administration and TP supervisors?
4. What were the challenges experienced during the TP exercise?

Methodology

Sampling

Survey data were collected during student teaching semester in June, July and August of 2012 in Kenya from the participating University. The school placements were spread all over the country. At this time, the country had eight geographical provinces with a total of forty-seven districts. During this semester the TP administrators, subdivided the entire school placements into 30 TP zones. Each zone was assigned a faculty to serve as the area coordinator.

Strategic sampling was used to identify the zones and schools for data collection. A third of the TP zones were chosen leading to 10 zonal areas for this study. In each area, six schools were selected. The distribution of the schools in each TP area was as follows – a national school; a provincial boys' school; a provincial girls' school; a district boys' school; a district girls' school and a private school. Table 1 below summarizes the sampling grid for one of the TP zones and for each school, 6 student teachers were chosen. In addition, 4 cooperating

teachers and/or Heads of Departments (HoDs) were selected; both the school principal and the area supervisor for each area were interviewed. Table 2 summarizes the total sample for all the selected 10 TP zones.

Table 1: Sampling Grid for One of the TP Zone

School Type	Number of Student teachers	Number of Cooperating Teachers/ HoDs	Principals	Area Supervisor
National	6	4	1	1
Provincial Girls	6	4	1	
Provincial Boys	6	4	1	
District Girls	6	4	1	
District Boys	6	4	1	
Private	6	4	1	
TOTAL	36	24	6	

Table 2: Total Sample Grid for the Whole TP Research

TP Zone	No. Schools	TP students	Cooperating Teachers/HoDs	Area Supervisors
Nairobi East	6	36	24	1
Nairobi West	6	36	24	1
Kiambu	6	36	24	1
Muranga/ Nyeri	6	36	24	1
Kakamega/ Vihiga	6	36	24	1
Bungoma/ Busia	6	36	24	1
Kisii Area	6	36	24	1
Nyamira Area	6	36	24	1
Mombasa Malindi A	6	36	24	1
Mombasa Malindi B	6	36	24	1
Total	60	360	240	10

Instruments

A survey questionnaire was developed for collecting data from the student teachers. The first item dealt with biographic data about the participants including gender, teaching subject areas and type of school where the student teacher was placed. The second, third and fourth sections of the questionnaire focused on a self-evaluation of a range of pedagogical aspects of teaching based on a 5-point Likert scale questionnaire. For the same range of pedagogical aspects, the student teachers were asked to evaluate how well the teacher education program prepared them in acquiring these skills, the extent to which they were able to apply these skills during their student teaching practice and the extent to which the mentoring and evaluation feedback from their supervisors enhanced their ability to apply these skills in teaching. On top, there was an open-ended section on how to make TP better.

A different survey questionnaire was given to the cooperating teacher and HoDs. In many cases, the cooperating teacher was also the HoD. The questions in this survey focused on the same pedagogical aspects addressed in the student teacher questionnaire but asked the cooperating teachers and HoDs to indicate the extent to which the student teacher was able to

apply these pedagogical skills in their teaching. The survey also included other information such as the frequency of observations they conducted with their student teachers.

The other two instruments used in data collection were interview schedules for the principal and for the area supervisor. The principal interview schedule focused on their views about the university’s TP program and about the university student teachers at their school. The area supervisor interview schedule covered the number of student teachers in the area, the role of area supervisor, the challenges faced and the strategies adopted to address these challenges.

Data Collection

In each school a researcher a) administered TP students questionnaires to all student teachers at the school, b) administered the questionnaire to 4 Cooperating teachers/ Heads of Department (1 Mathematics, 1 Sciences, 1 Languages and 1Social studies), and c) interviewed the principal. The researcher also interviewed the TP area supervisor. The questionnaires were completed by paper and pencil by the respondents while the interviews were audiotaped and later transcribed.

Data Analysis

The data were synthesized using Survey Monkey. The descriptive statistics were generated and qualitative data grouped by question for further analysis. The student responses (1) on the extent to which they were well prepared with teaching skills, (2) to apply the skills and (3) usefulness of the feedback from supervisors were compared to identify areas with high percentage scores versus lower percentage scores. Because this was a self-rating survey, it is typical that students would rate themselves highly on most of the items. As such the scores on the highest level of the Likert scale were considered (the *Very Good* scale). Percentage scores above 50% were studied as areas of positive performance while scores with less than 50% were considered as areas of weakness. The qualitative data from the interviews and additional comments were read and re-read by the research team members to identify common themes.

Findings from Quantitative Data

Perceptions of How the Education Program Prepared Student Teachers for TP

The percentages of student teachers who checked the *Very Good* rating scale were generated as seen in Table 3 regarding the self-rating of how the teacher education program prepared the student teachers on the various pedagogical aspects of TP. Scores of less than 50% are highlighted in bold font.

Table 3: Student Teacher Perceptions on How Well Prepared They Were for Teaching Practice

<i>Teaching Performance Aspect</i>	<i>Extent of Preparedness (n= 177)</i>
Create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.	66.7 %
Create learning experiences that make the subject matter meaningful to students	59.1 %
To foster relationships with school colleagues, parents, and agencies in the larger community to support students’ learning and well-being.	58.7 %
Use a variety of instructional strategies to encourage students’ development of critical thinking, problem solving and performance skills.	56.6 %
Plan instruction based upon knowledge of subject matter, students,	56.0 %

and curriculum goals.	
To be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and who actively seeks out opportunities to grow professionally	49.7%
Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.	46.9%
Provide learning opportunities that support students' intellectual, social, and personal development	45.8%
Create instructional opportunities that are adapted to diverse learners.	44.6%
Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.	44.0%
Integrate ICT in my teaching.	15.4%

The student teachers felt adequately prepared in 5 out of the 11 pedagogical areas surveyed. The areas where there was satisfaction on how well they are prepared include: creating a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation (66.7%); create learning experiences that make the subject matter meaningful to students (59.1%); fostering relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being (58.7%); using a variety of instructional strategies to encourage students' development of critical thinking, problem solving and performance skills (56.6%); and planning instruction based upon knowledge of subject matter, students, and curriculum goals (56.0%).

The areas where the student teachers perception were low include: the ability to integrate ICT in teaching (15.4%); the use of formal and informal assessment strategies to evaluate and ensure continuous intellectual, social, and physical development of learners (44.0%); the creating of instructional opportunities that are adapted to diverse learners (44.6%); the planning of learning opportunities that support students' intellectual, social, and personal development (45.8%); the use of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom (46.9%); being a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and one who actively seeks out opportunities to grow professionally (49.7%).

Perceptions of How Student Teacher Applied Theory during TP

On the self-rating of the ability to implement various teaching and learning strategies in their TP, the percentage of student teachers rating the preparation as *Very Good* were generated as shown in Table 4. On the same list of pedagogical aspects, student teachers' ratings show that they were very able to apply all these skills during their teaching practice except in the area of ICT integration in teaching (20.9%).

Table 4: Student Teacher Perceptions of How Well They Were Able to Apply The Learned Skills During TP

<i>Teaching Performance Aspect</i>	<i>Ability to implement (n=177)</i>
To foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.	70.1 %
Create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.	67.8 %
Create learning experiences that make the subject matter meaningful to students	62.7 %
Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.	61.6 %
Provide learning opportunities that support students' intellectual, social, and personal development	58.8 %
Plan instruction based upon knowledge of subject matter, students, and curriculum goals.	58.5 %
To be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and who actively seeks out opportunities to grow professionally	57.1 %
Use a variety of instructional strategies to encourage students' development of critical thinking, problem solving and performance skills.	55.4 %
Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.	53.1 %
Create instructional opportunities that are adapted to diverse learners.	52.1 %
Integrate ICT in my teaching.	20.9 %

Perceptions of Effectiveness of Feedback from Cooperating Teachers/HoDs

Table 5 has data generated from the self-rating regarding the extent to which the cooperating teachers and/or HoDs evaluation and feedback enhanced the student teachers' ability to perform on the various pedagogical aspects of TP. The data shows that the teacher candidates found the feedback to be useful in enhancing their abilities on all of the pedagogical aspects of teaching except in three areas. One of the areas where the feedback was found not to be useful was the ability to be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others i.e. students, parents, and other stakeholders in the learning community, and who actively seeks out opportunities to grow professionally (49.4%). A second unhelpful feedback was the use of formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners (46.6%). The feedback on ICT integration in teaching was the least useful (17.0%).

Table 5: Student Teachers’ Perceptions of the Effectiveness of Feedback from Cooperating Teacher/HoD

<i>Teaching Performance Aspect</i>	<i>Cooperating Teachers/HoDs: Feedback on effectiveness (n=177)</i>
Plan instruction based upon knowledge of subject matter, students, and curriculum goals.	63.8 %
Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.	61.1 %
Create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.	61.0%
Create learning experiences that make the subject matter meaningful to students	60.0 %
Use a variety of instructional strategies to encourage students’ development of critical thinking, problem solving and performance skills.	59.1 %
Create instructional opportunities that are adapted to diverse learners.	58.1 %
Provide learning opportunities that support students’ intellectual, social, and personal development	57.8 %
To foster relationships with school colleagues, parents, and agencies in the larger community to support students’ learning and well-being	52.0 %
To be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and who actively seeks out opportunities to grow professionally	49.4 %
Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.	46.6 %
Integrate ICT in my teaching.	17.0 %

Perceptions of Effectiveness of Feedback from the University Supervisor

Student teachers ratings on the effectiveness of feedback from university supervisor are in Table 6. The same three areas of unhelpful feedback from cooperating teacher/HoD are also noted with the university supervisor’s data.

Table 6: Student Teacher Perceptions of the Effectiveness of University Supervisor’s Feedback

<i>Teaching Performance Aspect</i>	<i>University supervisor: Feedback effectiveness (n=177)</i>
To foster relationships with school colleagues, parents, and agencies in the larger community to support students’ learning and well-being	59.6 %
Provide learning opportunities that support students’ intellectual, social, and personal development	58.0 %
Create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.	57.1 %
Plan instruction based upon knowledge of subject matter, students, and curriculum goals.	56.0 %
Create learning experiences that make the subject matter meaningful to students	52.0 %
Use a variety of instructional strategies to encourage students’ development of critical thinking, problem solving and performance skills.	52.0 %
Create instructional opportunities that are adapted to diverse learners.	51.2 %
Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.	50.9 %
To be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and who actively seeks out opportunities to grow professionally	47.1 %
Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.	45.6 %
Integrate ICT in my teaching.	17.9 %

In summary, the comparisons of TP teaching performance from Tables 3, 4, 5, and 6, reliably show low ratings for ICT integration. Other areas with consistently low rating are the use of formal and informal assessment strategies to evaluate, create instructional opportunities that are adapted to diverse learners and ensure the continuous intellectual, social, and physical development of learners.

Findings from Qualitative Data

In addition to the surveys ratings data, the student teachers were asked open-ended questions about other aspects of TP that they would like to see improved. Data from these responses were categorized into the following themes: resources, teaching methods, ICT, supervision, feedback and overall TP exercise. Two of these themes, ICT and supervision, are discussed below given the quantitative data are consistent with the qualitative data from interviews.

Information and Communication Technology (ICT)

The student teachers consistently cited ICT as an area they would like to see improved in their teacher education program. “The institution should encompass more ICT integration in TP training and provide material to facilitate improving the ICT in learning,” noted one student teacher. Other student teachers pointed to the need for subject specific technology support: “...should be equipped with the ICT knowledge in order to apply it effectively in

teaching of field work in Literature ... other disciplines such as Geography require a lot of ICT.” The student teachers emphasized the following:

1. That ICT be made a course requirement that must be taken before being cleared for the TP exercise.
2. The need for ICT services to be open to all student teachers and not just to a select group of students i.e. those participating on grant projects, students teaching math and science subjects.
3. They called for opportunities to practice ICT skill; i.e. “Students should be given an opportunity to have an experience in PowerPoint presentation, not just learning about it verbally as this brought us challenges in the school where we had our teaching practice, since it has the facility but we lacked the knowledge.”

It is evident from the student teachers’ open-ended responses that they recognize the need and the potential ICT has to teaching and learning.

Supervision

The student teachers cited a number of challenges they experienced during TP that were connected to supervision and four are discussed herein. The first issue was the fact that supervisors are assigned by region rather than by subject area. Several student teachers point to the need to have supervisors who teach the observed subject areas e.g. a student teacher stated:” Lecturers (University supervisor) should be familiar with the subjects he or she is supposed to supervise.” Subject experts should be used preferentially for assessment. The second issue dealt with frequency of the university supervisor’s visits. Several respondents pointed to “Frequent supervision of the student teacher” and “the assessors [referring to university supervisors] should visit or see the students as many times as possible.”

The third issue was about the communication between the university supervisors, the student teachers and the school personnel. Some student teachers commented on the need for supervisors to let them know when they will be observed: “The supervisors are supposed to inform student-teachers earlier in advance and not have impromptu visits since most of us become tense.” Similar remarks pointed to communications between area coordinators, supervisors and the student teachers. “... also communications[sic] with the school administrators because the school programs are not fixed but sometimes flexible. That is, they are affected by some extra activities like AGM [Annual General Meetings], staff meetings and curriculum activities.” Lastly, several student teachers called for observation by external supervisors. Such comments included: “Apart from internal supervisors, external supervisors should be encouraged (motivated),” “Introduce the use of external examiners during supervision” and “External supervisors should be involve in supervision.”

Discussion and Recommendation

Student Teachers-Preparedness for Teaching

To what extent does the teacher preparation program equip student teachers for their teaching performance expectations? From the findings, the areas of well preparedness were closely tied to planning lessons, classroom instruction, the ability to create meaningful learning environment for students and engaging students in active learning. The student teachers felt they were not well prepared in six of the teaching performance expectations, in the areas enumerated below in the ability to:

1. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other stakeholders in the learning community) and who actively seeks out opportunities to grow professionally

2. Use effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
3. Provide learning opportunities that support students' intellectual, social, and personal development
4. Create instructional opportunities that are adapted to diverse learners.
5. Use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of learners.
6. Integrate ICT in teaching and learning.

Since these aspects are taught in general education courses, student teachers may be failing to see how these expectations connect to TP. We recommend a curriculum mapping exercise in which the student teacher performance expectations are mapped against the courses taken during TP. Periodic review of the curriculum is also necessary to ensure that the courses are up-to-date with current research on teaching and learning. Also an area of urgency of the curriculum that needs addressing in the education classes is how to handle students with diverse needs. It is important for student teachers to develop skills of supporting all learners in the classroom; because they are often placed in schools where the host teacher does not provide the much needed guidance. Thus, Mukeredzi and Mandrona (2013) propose that teacher preparatory programs should include a course that covers student teachers ability to persevere, and have "resilience, stress management and most importantly creativity and flexibility" (p. 151), and such a course is to be taken before the TP exercise.

Regarding the question 'To what extent student teachers valued the feedback given to them by their cooperating teachers, HoDs and supervisors?' the student teachers had low ratings in three (a, e, and f) of the above areas. These findings seem to point out student teachers inexperience to these aspects of teaching—Are student teachers provided opportunities to be reflective practitioners, use assessment in decision-making and incorporate technology in the classroom?

Student Teachers' Implementation Abilities

How adequately were the student teachers prepared to employ the learned abilities and skills when delivering content in the classroom? While the rating on how student teachers feel prepared is low, the rating on their ability to perform is much higher. Apart from ICT, the student teachers' high ratings on their ability to perform on the teacher performance expectations (see Table 4) may be a pointer to the degree of confidence they carry to TP. This could be attributed to the fact that they were completing these surveys during student teaching, a time when they are also faced with the stress of being evaluated on their performance. It is therefore expected that they would want to position themselves as performing strongly while at the same time pointing to a lack of preparedness in the event that they are thought not to be performing well.

Information Communication Technology (ICT)

The most critical and significant finding of our study that calls for urgent concerted efforts in the teacher education curriculum is ICT integration. It received the lowest ratings across the four categories of our study. It is evident that the student teachers have little or no preparation on ICT integration and lack the know-how of classroom-based technologies. There are also no clear expectations for student teachers to integrate ICT during TP. Given the increasing influence that technology has on teaching and learning today, it is critical that this issue is given utmost consideration as part of the teacher education program.

Any deliberation on how to make ICT part of the teacher education program needs to include the concept of technological pedagogical content knowledge (TPACK), which has emerged over the last decade. The TPACK framework is an interrelationship of content, pedagogy, and technology knowledge (Akarasriworn & Ku, 2010; Mishra & Koehler, 2006),

which is a worthwhile knowledge base and endeavor in preparing effective teachers for the 21st century. Apart from teaching about technology integration, teacher education faculty need to model current appropriate technologies in their own classrooms and offer hands-on tasks so that student teachers not only learn about technology integration but also experience it in their own learning.

TP Challenges

Other dominant challenges experienced during the TP exercise relate to supervision. According to the *Student Handbook*, student teachers are initially meant to be observed by a pedagogy faculty to examine their schemes of work and lesson plans before they start teaching. After this, they are supervised at least six times, that is, a minimum of three observations per teaching subject (major and minor content area) during the three months of TP. The grade given at the end of TP becomes part of the student teacher's classification. This structure faces a number of challenges when it comes to the actual assignment of supervisors during TP. For instance there are not enough supervisors to observe each student teacher per the *Student Handbook* requirement.

Currently, the issue with supervision raised by student teachers about the need for subject area specific supervisors evaluating them during TP is problematic to overcome given the large TP enrollments and the vastness in mileage in which the postings occur. One possibility to ensure that the supervisors are versed with the subject content is to group them by the subject panel area such as Mathematics and Science Education, Social Studies Education, Language Education, Creative Art Education and Physical and Health Education. Any specialist in the subject panel areas should supervise a group of subjects e.g. Chemistry, Biology, Physics and Mathematics. When these supervisors visit a school site, they should be allowed to observe any student at that site who is teaching within the subject panel of their specialty. On the other hand, the student teacher should keep a visitation log in which the supervisors sign in to show what subject areas they have been assessed.

Regardless, there is need for institutions offering teacher education to plan and employ adequate staff in varied disciplines to offer expertise feedback during TP. The idea of using co-operating teachers as part of the staff, is good only if the responsibility does not go beyond mentoring the student teacher to writing a report to the university which could be used for grading and classifying the student teacher for graduation.

Another issue with supervision is lack of communication between and among the participants in the TP exercise - the TP placement office, the area coordinators, the university supervisors, the school administrators and student teachers e.g. the supervisors should inform student teachers in advance about classroom observation and not make impromptu visits.

Ayot and Wanga (1987) list in their book, fifteen principles "of effective supervisory feedback." These principles should be made accessible to supervisors. The first principle is in agreement with what Nguyen (2009) notes that, mentors or supervisors are to be supportive of student teachers to enable them reflect-in and reflect-on practice and also by being "clear in their expectations of self and other" (p. 660) i.e. the supervisor should have a good understanding of the relevant resources used in teaching in order to guide the student teacher towards the fundamental resources for adjusting a lesson plan to improve instruction. The purpose of doing TP will not be meaningful to the student teachers unless the feedback is reflective of their abilities and is informative. Supervisory feedback should help the student teacher improve in areas of weakness and the assigned grade should mirror the student teacher's efforts.

The student teachers can be provided with a reflection guideline or tool that is tied to the essential elements of instruction (Hunter 1986). Ochanji (in press) suggested some guiding questions for helping student teachers reflect on the essential elements of their teaching namely: (a) what goals did you have for your students for this lesson? (b) What learning

activities did you engage your students with in order to help them make progress towards the learning goals? (c) How effective were these strategies in helping your students to make progress towards the learning goals? (d) What evidence of student learning and/or learning difficulties did you collect from your students?

Conclusion

Teacher education is an important part of human resources for national development. Thus it is important to build the capacity of teacher education of which TP is part of this process. We advocate for curriculum mapping of teacher education courses to ensure that appropriate ICT knowledge and skills are covered before TP by offering coursework on modern accessible ICT. Integrate ICT in the teacher education program to have graduates ready to meet the demands of the prevailing job market. Likewise, it is important for student teachers to develop skills on how to deal with all learners in the classroom. Thus the teacher education program should be reviewed to address content and skills on how to handle students with diverse needs and large classes.

Finally, the institutions offering teacher education should plan to have adequate staff in respective teaching areas to offer expertise during TP. The provision of expert feedback can even begin earlier, before TP, via facilitation of rigorous microteaching experiences. On top of training adequate TP supervisors, put careful consideration to school placements and in a timely manner coordinate the posting of student teachers.

References

- Akarasriworn, H. & Ku, Y. (2010). Mathematics faculty members' roles, skills, and teaching experiences in a hybrid environment. In D. Gibson, B. Dodge (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 258–263.
- Ayot, H. O., & Wanga, P. E. (1987). *Teaching practice*. In D. M. Kiminyo (Ed.) *Series on provision of leadership training in primary teacher education supported by ODA through British Council HED Section*. Kenyatta University Faculty of Education and University of London Institute of Education.
- Beck, C. (2002). Components of a good practicum placement: Student teacher perceptions. *Teacher Education Quarterly*, 29(2), 81-98.
- Chen, R. (2009). Investigating models for pre-service teachers' use of technology to support student-centered learning. *Computers & Education*, 55, 32-42. doi:10.1016/j.compedu.2009.11.015
- Council for the Accreditation of Educator Preparation (2013). CAEP 2013 Standards for Accreditation of Educator Preparation. Retrieved from <http://caepnet.org/accreditation/standards>
- Du Plessis, E. C., Marais, P., van Schalkwyk, A. & Weeks, F. (2010). Adapt or die: The views of Unisa student teachers on teaching practice at schools. *Africa Education Review*, 7(2), 323-341.
- Glickman, C. & Bey, T. (1990). Supervision. In W.R. Houston (Ed.), *Handbook of research on teacher education* (pp. 549-566). New York: Macmillan.
- Groth, R. (2009). A qualitative approach to assessing technological pedagogical content knowledge. *Contemporary Issues in Technology and Teacher Education*, 9(4), 392-411.
- Hunter, M. (1986). Madeline Hunter replies: Develop collaboration, build trust. *Educational Leadership*, 43(6), 68.
- Leshem, S. & Bar-Hama, R. (2008). Evaluating teaching practice. *English Language Teachers Journal*, 62(3), 257-265. doi:10.1093/elt/ccm020.
- Lewin, T. (2011, July 21). Training of teachers is flawed, study says. The New York Times. Retrieved from <http://www.nytimes.com>.
- McIntyre, J., Byrd, D., & Fox, S. (1996). Field and laboratory experiences. In J. Sikula (Ed.), *Handbook of research on teacher education* (pp. 171-193). New York: Macmillan.
- Ministry of Education (2013). Quality Education for Development. Retrieved from www.education.go.ke
- Mishra, P. & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108 (6), 1017–1054.
- Mukeredzi, T. G., & Mandrona, A. R. (2013). The journey of becoming professionals: Student teachers' experiences of teaching practice in a rural South African context. *International Journal of Educational Research*, 62, 144-151.
- Nguyen, H. T. (2009). An inquiry-based practicum model: What knowledge, practices, and relationships typify empowering teaching and learning experiences for student teachers, cooperating teachers and college

- supervisors? *Teaching and Teacher Education*, 25, 655–662.
- Ochanji, M. (In press). Guided teaching for guided learning. Supporting elementary science teacher candidates during clinical practice. *Journal of Elementary Science Education*.
- Shulman, L.S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15 (2), 4–14.
- Shulman, L.S. (1986). Knowledge and teaching: Foundations of the new reform. *Harvard Education Review*, 57 (1) (1987), pp. 1–21.
- Udeani, U. & Ejikeme, C. (2011). Practicing teacher’s perception of undergraduate preparation for science teaching in secondary schools in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 2(6), 531-536.
- USAID. (2013). Kenyatta University-Syracuse University partnership on building capacity through quality teacher preparation. Retrieved from <http://www.usaid.gov/kenya>.
- Wyss, V. L., Siebert, C. J., & Dowling, K. A. (2012). Structuring effective practicum experiences for pre-service teachers. *Education*, 132(3), 600-606.

This research was funded in part by the US Higher Education for Development (HED) and the United States Agency for International Development (USAID).