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Evaluation of Pre-Service Education Programme in Terms of Educational Assessment

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Abstract

This study evaluated the training of pre-service teachers in the various tertiary institutions in Ghana to find out whether professionally trained teachers are given adequate training in assessment. The methodology employed for this study was a qualitative case study. The study focused on two universities and the colleges of education in Ghana. Unstructured interviews were also conducted using an interview guide. The purposive sampling procedure was used to sample three teaching practice supervisors who are college professors, five preservice teachers, and two teaching practice coordinators. A total of ten respondents were interviewed. Through purposive sampling technique, five different sets of documents were sampled and critically analysed. Qualitative content analysis revealed that the training of pre-service teachers in tertiary institutions in Ghana placed less emphasis on how to assess students. The major emphasis of the training of pre-service teachers was on lesson planning, delivery, and demonstration of pedagogical skills with the aim of imparting knowledge. Based on the findings, it was commended that the management of educational institutions should factor the educational assessment a core element in the training of pre-service teachers.

Keywords: Assessment, training, pre-service teachers, teacher development, quality teaching

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Introduction

Training human resource needs of any country is critical to economic growth and development. This justifies the need for effective teachers to be trained (Asare, 2011). It is in this light that the Sustainable Development Goal (SDG) 4 advocates for inclusive and equitable quality education, and promoting lifelong learning opportunities for all. For this goal to be achieved, teachers are supposed to play a critical role in ensuring quality education. This brings to bear the essence of training quality teachers who will, in turn, be posted to various schools to teach. Ghana, as a nation, has for some years now made several efforts in the training and development of teachers mandated with the training of manpower needs of the nation (Asare & Nti, 2014). The last committee to review the Ghanaian teacher education programme suggested a significant review and innovative approach making teacher education essential to national development (The Presidential Committee on Education, 2002).

In Ghana, teachers are trained in the Colleges of Education (CoE) and universities authorised with the training of teachers. The country currently has 46 Colleges of Education responsible for running Diploma in Basic Education (DBE) programmes with the aim of training teachers for the Basic Schools in Ghana (Institute of Education, 2016). The CoE, however, are under the supervision of Institute of Education of the University of Cape Coast. Besides from the CoE, the University of Cape Coast and the University of Education also through various departments in the universities run Bachelor of Education (B.Ed.) degree programmes in training teachers for both basic and secondary schools. The duration of the DBE programme in the CoE is 3 years whereas the B.Ed. programme has 4 years duration of the study. In each of the qualification, pre-service teachers go through both classroom and experiential training. As part of their training, pre-service teachers are not only taught to deliver lessons but also trained on how to assess students' learning outcomes.

Educational assessments are an indispensable part of the teaching and learning process because it helps examine whether set objectives are achieved and subsequently, become a tool for learning (Goodrum, Hackling, & Rennie, 2001). It is worth saying that teachers, right from primary school, or even in the Kindergarten to the highest level of education, globally, one way or another engage in some form of assessment procedures with the aim of investigating whether or not learning has been achieved or sometimes for placement and selection to next level of education. This is to say that the practice of assessment is not for some selected teachers but for all teachers. Teachers are expected to engage in quality assessment to enhance their teaching activities.

Teaching and assessment go hand in hand. Good teaching decisions (e.g., lesson planning) are based on high-quality information (which is from assessment procedures) (Wass et al. 2014). As the popular saying goes “garbage in garbage out”, teachers who engage in inappropriate assessment procedures would have low-quality information and consequently, make bad teaching decisions. From Nitko's view (2001), improving assessment skills as a teacher helps in:“(1) increasing the quality of your teaching decisions, (2) communicating in a powerful way what you really value in your students' learning, (3) increasing your freedom to design lessons, (4) improving the validity of your interpretations and uses of assessment results, and (5) appreciating the strength and limitations of each type of assessment procedure” (p. 105). This seems to suggest that teachers who know how to assess very well are likely to have quality teaching, and vice

versa.

Teachers/Pre-service Teachers Competencies in Educational Assessment

Assessment practices of teachers in Africa have been of major concern to stakeholders in education (e.g., Amedahe, 1989; Hamafyelto et al., 2015; Ololube, 2008; Quansah & Amoako, 2018). Scholars have found a gap between teaching and assessment tasks and what occurs in the world of work (Fisher et al. 2005; Gulikers et al. 2006; Mintah 2003; Rust, 2002). Mintah (2003), for example, stated that even though teachers set instructional goals, the majority of them do not assess these goals. This situation is not different in Ghana as evidence suggests that basic, secondary, and tertiary school teachers have poor assessment practices (e.g., non-adherence to testing principles, assessment not authenticity, and delayed feedback from assessment, poor grading practices, etc) (e.g., Adu-Mensah, 2018; Anwere, 2009; Amedahe, 1989; Akyeampong, 1997; Kankam et al., 2014; Sofu et al., 2013; Quansah et al., 2019).

Kankam et al. (2014) also discovered that examination questions crafted by Social Studies teachers in Senior High Schools (SHS) in Ghana did not match what the students were required to engage in after school. The authors, therefore, recommended that Ghanaian universities should do well to broaden their scope on the teaching of assessment to incorporate authentic assessment. Kankam et al. (2014) reiterated that there is a growing use of non-authentic assessments in SHS in Ghana. Sofu et al. (2013), in addition, revealed that Physical Education (P.E) teachers in SHS in Ghana rarely employed assessments which provided an opportunity for peer or self-assessment. Sofu and colleagues further indicated that the P.E teachers did not use a wide range of assessment technique even when it is required. This was also supported by Amedahe (1989) in his study that most teachers in Ghana have inadequate skills in test construction (objective and essay type).

In the Colleges of Education in Ghana, Anwhere (2009) investigated whether tutors follow the basic laid down principles of testing practices, especially, test construction, administration and scoring of classroom or teacher-made tests. The study was conducted in twenty public colleges of education in Ghana. Anwhere found that colleges of education teachers did not adhere to the basic testing principles in the construction of tests and that the management of assessment practices was perceived as an extra load to their teaching activities.

In another study, Quansah and Amoako (2018) explored the attitude of teachers towards test construction. The authors sampled and administered questionnaires to 432 Senior High School teachers in the Cape Coast Metropolis, Ghana. The authors found a negative attitude of teachers towards test construction. In a different study, Quansah et al. (2019) explored the test construction skills of SHS teachers in the Cape Coast Metropolis. The methodology was a qualitative document analysis. Samples of End-of-Term Examination papers in Core Mathematics, Integrated Science, and Social Studies in three selected SHS in the Cape Coast Metropolis were randomly sampled. The samples of assessment tasks were censoriously assessed by experts in the field of educational measurement. Their findings revealed that the teachers have limited skills in the crafting of examination questions. This was evident as problems were found with the content representativeness and relevance of the test, reliability, and fairness of the assessment tasks which were assessed. In the area of grading, Adu-Mensah (2018) examined basic school teachers' attitude toward grading practices. A survey was

conducted in 50 basic schools where questionnaires were administered to 278 teachers. Basic school teachers were found to have a negative attitude towards grading.

In their study, Asare and Nti (2014) observed that pre-service teachers had difficulty in collecting and using students' data in improving their teaching instruction. According to Asare and Nti (2014), it was found that the pre-service teachers believed that teaching ends when lessons are over, indicating that no proper feedback was taken from students after teaching. Other studies conducted have confirmed the observations of Asare and Nti (2014). These studies discovered that pre-service teachers had low competencies in the construction of test items in formal and informal assessment of their students (e.g. Asim, Ekuri, & Eni, 2013; Gordon, Collins, & Jewell, 2015; Koetsier & Wubbels, 1995, Nenty, Adedoyin, Odili, & Major, 2007).

The aforementioned studies seem to suggest that both pre-service and teachers teaching in basic and second cycle schools in Ghana have inadequate skills in assessment, in general. It must be stated that these studies were conducted using professionally trained teachers (e.g., Adu-Mensah 2018; Anwhere 2009; Asim, Ekuri, & Eni, 2013; Mintah, 2003; Quansah & Amoako, 2018; Quansah et al. 2019). This raises questions regarding the training of pre-service teachers in educational assessment. Is it that these teachers are not trained on how to assess? or they are trained but do not engage in appropriate assessment practices due to factors such as negative attitude, as revealed by Quansah and Amoako (2018), and Adu-Mensah (2018)? These are mindboggling questions which necessitate a study of this nature. This study, therefore, seeks to evaluate the training of pre-service teachers in the various tertiary institutions in Ghana, to find out whether professionally trained teachers are given adequate training in assessment. To achieve this objective, documents on the training of teachers are critically evaluated. Interviews were additionally conducted to have an in-depth understanding of the issue. This investigation is significant because it will provide relevant information for stakeholders to inform policy and practice in teaching and learning in schools. It is important to state that the findings of the study would also serve as a prompt for other foreign countries who have similar teacher training system.

Classical Test Theory

The Classical Test Theory (CTT) was introduced by Charles Spearman in the year 1904 who figured out how to correct a correlation coefficient for attenuation as a result of measurement error and how to attain the reliability index required in making the correction (Traub, 1997). Others scholars who influenced the conceptualisation of CTT were Truman Lee Kelley, George Yule, propounders of Kuder-Richardson Formulas, Louis Guttman, and, most recently, Melvin Novick, not to mention others over the next quarter-century after Spearman's initial findings (Lord & Novick, 1968).

Classical Test Theory (CTT) is founded on the assumption that a total test score made up of multiple items. That the raw score (X) obtained by any one individual is made up of a true component (T) and a random error (E) component: $X = T + E$ (Allen & Yen, 2002). For example, if on an IQ test Joe's true score is 108 but his observed score is 122, then X is 122, T is 108, and E is +14. If Joe is tested again and his observed score is 100, then X becomes 100, T is still 108, and E is -8. For any given examinee and test, T is assumed to be a fixed value, although E and X vary for that examinee on different testing occasions.

This study, in using CTT, focuses on how assessments in education contribute to errors

in the observed scores of students. In the education system, it is expected that the observed scores of students equal their true score which implies that their observed scores are error-free. Although this is something too difficult to achieve, it is possible to reduce the errors so that these errors would have an insignificant effect on the observed scores. In a real sense, if teachers develop a test with poor items, they introduce several errors to the estimation of the overserved scores of students.

This theory is significant in its effort to give a comprehensive understanding of how scores and grades of students can be contaminated by several factors. This study also explains how assessment practices of teachers are likely to significantly contribute to the errors in scores. The theory further helps to discuss why students might have good academic achievement in schools but become handicapped when there is an opportunity for them to apply what has been learnt in schools.

Methods

The methodology employed for the study was a qualitative case study with document analysis. The study took a qualitative approach because the problem to be investigated demanded information in the form of descriptions and narratives. A multiple case study methodology was used since an in-depth analysis of the training of pre-service teachers on assessment practices in the various tertiary institutions was studied (Creswell 2014). The study focused on two universities and the colleges of education in Ghana. These institutions were selected because they are the major institutions tasked with the training of teachers for schools in Ghana.

Through purposive sampling technique, five sets of documents were sampled: (1) detailed document on the structure of the education programmes, (2) course outlines on the “Assessment in Schools” course from the two universities and the colleges of education, (3) “Assessment in Schools” coursepacks/notes or lecture synopsis from the two universities and the colleges of education, (4) Documents on on-campus and off-campus teaching practice, (5) Nine samples of past questions for the course in the various institutions. Before the documents were requested, ethical issues were taken into consideration.

Unstructured interviews were also conducted using an interview guide. The purposive sampling procedure was used to sample three teaching practice supervisors who are college professors, five preservice teachers, and two teaching practice coordinators. A total of ten respondents were interviewed. Combining secondary data (documents) with the primary data (interviews), according to Creswell (2014), helps to enrich the understanding of the issue under investigations. Qualitative content analysis was used for analysing the data. The objective was to analytically convert a large amount of text into a greatly organised and terse summary of key results. In the analysis, pseudonyms were given to the interviewees for purposes of anonymity. For Pre-service teachers, their names were A, B, C, D, and E. Similar pseudonyms were given to the supervisors (AX, BU, & ER) and coordinators (WA & TU).

Results and Discussion

After critically analysing the documents, two major themes emerged:

1. the course structure of the education programme
2. preparation of pre-service teachers for the teaching profession

The course Structure of the Education Programme in Ghana

Evidence gathered revealed that professional teachers in Ghana are trained within a period of three and four years depending on the type of degree. The CoE use three years in training teachers after which they are awarded a diploma degree and are only qualified to teach in basic schools. The universities who train teachers also run diploma programmes in education within the same three-year duration. The universities, in addition, run a four-year bachelor of education degree which is also aimed at training teachers for basic schools (e.g. those who read Bachelor of Education degree in Basic Education and Early Childhood) and Senior High Schools in the country.

Analysis from the documents gathered revealed that students who read the three-year diploma programme were required to accumulate 60 to 85 credit hours. For the four-year bachelor of education programme, students were required to accumulate 120 to 141 credit hours. It was discovered that pre-service teachers, irrespective of the type of degree, take several courses which accumulate into the credit hours indicated above. These courses are categorised into general courses (i.e., courses taken by all education students) and elective courses (i.e. depending on the type of programme enrolled on). At the diploma level (i.e., colleges of education), some of the general courses mounted were Principles and Practice of Education, Principles and Methods of Teaching in Basic Schools, Trends in Education and School Management, Assessment in Schools, and Introduction of Guidance and Counselling. Similarly, general courses such as History and Management of Education, Assessment in Schools, and Guidance and Counselling were also mounted at the degree level. It was found that the majority of the elective courses focused on training students on the methods of teaching in various disciplines.

The data revealed out of the 60-80 and 120-140 credit hours, only one course related to educational assessment is included, which some institutions called it “Assessment in Schools” and others, “Measurement and Evaluation”. This course was found to be a 2-3 hour taught-course. Some of the thematic areas of this course included:

1. the nature of educational assessment
2. goals and learning objectives of instruction
3. Test validity
4. Test reliability
5. Planning achievement test and assessment
6. Crafting the various forms of test items (traditional assessment)
7. Assembling, administration and appraisal of achievement tests
8. Interpretation of test scores
9. Contemporary issues in assessment (alternate assessment)

The course content in the institutions provides a rich and detailed scope of educational assessment aimed at preparing pre-service teachers. It was found that, on average, the course is taught for 12-15 weeks (3 hours per week). An examination of the course outlines for the course for the various institutions revealed the major mode of assessment for the course, which included two quizzes (20 points for each quiz) and an end-of-semester examination (60 points). In a few observed cases, students were given the assignment to be submitted. Analysis from samples of past questions on the course

revealed that the majority of the questions were found to measure lower-order cognitive operations: recall, comprehension, and application. Even in situations where essay questions were administered, the items were on comprehension and application. None of the questions required the use of high-order cognitive operation.

Further information was sought from the pre-service teachers through interviews conducted. The general impression created was that educational assessment was seen as any other core course, usually mounted by the institution for all education students, which needs to be passed. As a result, less attention was paid to it by the students themselves. These are some of the excerpts when the pre-service teachers were asked about their view about educational assessment course:

“From my view, assessment is one of the important courses in education. Our training, however, places less emphasis on assessment. The training was so much on methods of teaching” (Pre-service Teacher A)

“assessment is just like any general course all education students take. I personally think that the most important thing is that I pass those courses” (Pre-service Teacher B).

“assessment is a core course which all education students are required to register. Our training, however, is mostly on how to acquire the pedagogy to impart students” (Pre-service Teacher C)

“...I took a course in assessment in schools which enlightened me a lot. I have forgotten most of the things taught since I do not practice them. It is one of the education courses we took and most students perform well in the course” (Pre-service Teacher E).

When asked about how the course was handled in term of teaching and assessment of the course, the pre-service teachers reported that the educational assessment course was taught well by the instructors. The interviewees, however, indicated that they did not have much opportunity to put into practice what was taught. Some interviewees acknowledged that even though they do not have mastery over issues in educational assessment, they believed once they have been trained as teachers they can develop a test to assess their students. Others interviewees, nevertheless, expressed less confidence in the issues of educational assessment. In his own words, Pre-service Teacher A voiced that:

“...if I could remember, the lecturer taught us well. We wrote quizzes and an end-of-semester examination. No practical platform was provided but setting questions for students is something every teacher should be able to do. I do not think “assessment” is my specialisation”.

Pre-service Teacher B also indicated that:

“the tutor who handled assessment in schools explained things very well. We were given some reading assignments but we were given two quizzes to write at the end of the day. To be honest, I used rote learning to pass the course. As a professional teacher, I know I can develop a test for students I have taught”.

Additionally, pre-service Teacher D also stated that:

“I was taken through the course for the whole semester through the lecture method. The instructor organised two quizzes and an end-of-semester examination. The course was of little practical touch....I would have difficulty remembering what was taught but then assessment is something every professional teacher know and can do”.

Pre-service Teacher E also voiced:

“the assessment course I took did not give me much exposure to practical issues in assessment. Most of the things I think will learn it properly when I go to the field”
(Pre-service Teacher E).

Generally, it appears that the assessment course taken in the training of teachers is less emphasised. Although the interviewees (pre-service teachers) admitted that the course is significant to the teaching profession, they believed that they have not been properly equipped with issues of assessment. Analysis from document analysis also speaks to the fact that a single course of assessment is not sufficient enough to train pre-service teachers in assessing their students. This coupled with the mode of assessment of the course raises concern to what actually goes on in schools in Ghana. It becomes a concern that students learning has been misconstrued with the recall of facts and getting higher scores in examinations. In the case of this study, it would be not unexpected that pre-service teacher may have little knowledge of educational assessment which is embedded in teaching.

Preparing Pre-Service Teachers for the Teaching Profession

Data showed that in order to provide pre-service students with experiential training regarding the teaching profession, two programmes have been instituted: (1) on-campus (peer teaching) teaching practice, (2) off-campus teaching practice. It is important to say, per observation of the documents, that the on-campus and off-campus teaching practice are purely practical and whatever students are expected to do has been taught in previous courses. Normally, the on-campus precedes the off-campus teaching practice and serves as a preparatory grounds for pre-service teachers to be trained. Whereas the on-campus carried 3 credit hour, the off-campus weighted 12 credit hours. For the on-campus, smaller classes are created and each pre-service teacher is required to select appropriate topics within their field. The on-campus focuses on peer teaching where pre-service teachers evaluate themselves before the lecturer does the final assessment. The off-campus takes place in a well-established and preferred basic or senior high school where pre-service teachers engage in teaching and learning activities. They are assigned both internal and external supervisors who monitor, assess and evaluate their performance on the job.

A follow-up interview was conducted to find out, from stakeholders, the focus of the teacher training programmes. The general created was that the focus of the training programme is to train students to teach. Respondent ER said that:

“The general focus of the teacher training programme is to equip pre-service teachers with the required pedagogy in lesson delivery. The on-campus and off-campus is to coach education students on how to teach”.

In another view, respondent AX stated that:

“...to train professional teachers in the management of classroom activities.

We emphasise effective instructional delivery to all learners. During their training, they are exposed to the classroom setting aimed at equipping them to function well in the world of school”.

Other respondents also indicated that the training of teachers is centred on equipping pre-service teacher to impart knowledge to learners. Some of the responses provided include:

“Teachers are trained in Colleges of Education and Universities for them to impart knowledge into learners in the classroom. We give them practical training in examining, identifying and solving classroom problems” (Respondents TU)

During their training, potential teachers are well shaped in all activities which concerns teaching and learning” (Respondents WA)

It was found from the documents on the experiential training programme (on-campus and off-campus teaching practice) that the training focused on three dimensions: planning of the lesson, teaching methodology and delivery, and professional commitment. Subsequently, the assessment focused on these dimensions. In both training programme (i.e. on-campus and off-campus teaching practice), pre-service students’ ability to: (1) clearly plan their lessons carried 25 percent, (2) identify appropriate methodology and delivery mechanisms were scored 65 percent, and (3) demonstrate professional commitment had 10 percent.

A critical look at the documents revealed that the experiential training programmes place less focus on educational assessment. Out of 20 core points (100%) for training pre-service students to gain practical hands-on skills, only one (5%) solely focuses on educational assessment. Under the teaching methodology and delivery section, one of the core issues stated is “using a variety of assessment techniques to determine understanding; ensuring appropriate and timely assessment; encouraging students’ self-assessment and application of learning”. This core point emphasises an aspect of formative form of assessment which is not used for grading and provides little information about students learning. Expanding on this core point, pre-service teachers, through diverse techniques, are trained and required to assess their students during or immediately after lesson delivery. This, in most classrooms/schools in Ghana, is seen in the form of oral questioning by the teacher, class exercises, and homework. Although pre-service teachers during off-campus teaching practice construct test items, administer, score and grade, this procedure is not assessed and consequently, does not form part of evaluating pre-service teachers. What is expected of them is that they have to do some form of assessment but not the quality of the assessment.

Analysis from the experiential training programme document revealed that both internal and external supervisors scored the lesson plan by evaluating the lesson notes prepared by the pre-service teacher. For the other two dimensions, supervisors do their assessment based on the demonstrations and activities exhibited by the pre-service teachers during teaching. This is where the evaluation of the quality of teaching of pre-service teachers ends. This is to say that educational assessment is only seen during lesson delivery where it becomes difficult to use written items. Therefore, it is highly possible that the assessment component of training pre-service teachers is merely in oral questioning.

Data from the interview revealed that stakeholders felt that a course in assessment was enough to prepare pre-service teachers well. The interviewees were of the view that although they do not pay too much attention to educational assessment, they stated that pre-service teachers take at least a course in assessment and are as well trained to take feedback from their students after teaching. Some of the excerpts from the interviews include:

“Yes! Pre-service teachers are given training on assessment throughout the course of their study. They take a course in assessment; they are taught to assess their students even though little attention is paid to that” (Respondent BU).

“Students being trained as teachers have taken “Assessment in Schools” course which is geared towards developing their competencies in school assessment. Again, during the on-campus and off-campus teaching practice, they are trained to get feedback from students immediately after or even during teaching” (Respondent WA)

“Actually, issues of assessment are embedded in teaching and learning. As students are taught to train to teach well, they get the skill of assessing students. This is because for them to know whether what has been taught is understood, they need to assess their students” (Respondent AX)

“During the training of pre-service teachers, students get the opportunity to take a course on assessment for a particular semester. The students are also evaluated during their experiential training on asking questions to students after teaching” (Respondent TU)

“Pre-service teachers are not given direct experiential training on educational assessment. Assessment in their training is only in the form of formative assessment forms where the pre-service teacher is supposed to ask questions before, during, and after lesson delivery” (Respondent ER).

Further information was sought from the stakeholders on how they feel about the adequacy of education assessment training of pre-service teachers. It appears generally that they felt the training of assessment was effective. However, some implicitly stated that the training on educational assessment seems not to be enough. Below are some of the excerpts from the interviews:

“Well, I would say that the educational assessment training given to pre-service teachers is sufficient, to some extent. They take a course in assessment and as well trained to get feedback from learners after a period of instruction” (Respondent BU).

“Yes, the assessment training is ok. Besides, they do a lot of learning-on-the-job during the experiential. They are coached; they learn from teachers while learning to teach. In some cases, they are allowed to craft questions and are evaluated by in-service teachers” (Respondent WA)

“I think pre-service teachers have enough training in assessment. During their training, they are taught about the rules and principles in assessment, how to craft test items, how to assemble and even how to evaluate test items” (Respondent TU)

“Virtually, they are taught everything about assessment they need to know. Although, we do not do an evaluation of test items crafted by these pre-service teachers” (Respondent AX).

It appears, from the data gathered that the experiential training programmes put in place for the training of teachers in Ghana places greater emphasis on lesson planning, delivery, and demonstration of pedagogical skills. From all indications, there seems to be a gap in the training of pre-service teachers on educational assessment. Less emphasis is placed on training pre-service teachers to be equipped on issues of assessment even though some supervisors indicated that the training was effective. It is not surprising that Asare and Nti (2014) observed that pre-service teachers had difficulty in collecting and using students’ data in improving their teaching instruction.

Some stakeholders’ interview sounded as if teachers are trained to teach and not to assess, perhaps. This view was also shared in a study by Asare and Nti (2014) who found that the pre-service teachers believed that teaching ends when lessons are over, indicating that no proper feedback was taken from students after teaching. Other studies have also discovered that pre-service teachers had low competencies in the construction of test items in formal and informal assessment of their students (e.g. Asim, Ekuri, & Eni, 2013; Gordon, Collins, & Jewell, 2015; Koetsier & Wubbels, 1995, Nenty, Adedoyin, Odili, & Major, 2007). This probably can be attributed to the fact that their training places less premium of educational assessment. When these pre-service teachers become in-service teachers, they continuously would have problems with educational assessment. No wonder several studies have found that teachers have poor assessment practices in basic, secondary and tertiary institutions in Ghana (e.g., Anhwere, 2009; Amedahe, 1989; Akyeampong, 1997; Kankam et al., 2014; Sofu et al., 2013; Quansah et al., 2019). This can be attributed to the less training they receive on educational assessment during their professional training as a teacher.

Implications for Teacher Development

It is well established that teaching and assessment are “bedmates” such that there exists a strong positive relationship between them (Nitko, 2001). Making excellent teaching decisions (such as decisions on which teaching and learning materials to use, setting learning objective, how to introduce lessons, how to involve students, etc) greatly depends on effective assessment procedures and practices (Wass, Miller, & Sim, 2014). This means that teaching is never complete without assessment such that a teacher with little knowledge and skill in assessing his/her students certainly would engage in poor teaching. Such a teacher would have difficulty in achieving his/her instructional goals and consequently, make poor teaching decisions. This is to say that it is unlikely that good and quality teaching can take place without effective assessment practices.

Placing the results of this study in the context of teacher training and development, it becomes a concern regarding what the future holds for the Ghanaian education system. This study revealed that teachers have little training in educational assessment such that hardly can a teacher construct a good test, administer, score and interpret appropriately. What it means is that the amount of students' learning cannot be accurately estimated and therefore, any attempted estimations will be full of measurement errors. This, in most cases, is likely to jeopardize students' learning. This happens in most cases where students complain about the nature of questions given to them to answer. Teachers who are not confident in issues of assessment would develop a negative attitude towards

assessing their students; most of these teachers are found to rely on past questions (Quansah & Amoako, 2018). Teachers need to be trained sufficiently in educational assessment for teaching to be effective in schools.

Conclusion and Recommendations

The training of pre-service teachers in Ghana pays less attention to how they are to assess their students after teaching. This speaks to the fact that the essence of assessment in education is not known by stakeholders and major policymakers in education. To be honest, it is easy to underestimate the role of assessment in teaching and learning, if it is assumed that once teaching takes place, learning is automatic. Taking a single course in assessment may not provide in-depth knowledge and understanding of educational assessment. This can result in having a poor attitude towards the need for effective assessment.

Based on the findings, it is recommended that the management of educational institutions should mount more courses in educational assessment during the training of pre-service teachers. Lecturers who handle courses in assessment in tertiary institutions should engage in practical teaching and learning regarding issues of assessment. The content of experiential training programmes (i.e. on-campus and off-campus teaching practise) should be modified to include training pre-service teachers on how to assess their student. Finally, Ghana Education Service together with heads of institutions should organise workshops and seminars on educational assessment to equip teachers with competencies in assessing students in schools.

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