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TEACHING PRACTICE EVALUATION: PRE-SERVICE TEACHERS' REFLECTION

Abstract:

Teaching practice is an important aspect of teacher education programmes in terms of pre-service teachers' ongoing professional development. Teaching practice evaluation on the other hand, is used to measure pre-service teachers' effectiveness based on the quality of their teaching and the promotion of professional learning. This study aims to explore pre-service teachers' reflection on their teaching practice evaluations. It sought to explore pre-service teachers' perceptions and reflections based on their mentors' grading of their teaching practice evaluation. The participants were third year Bachelor of Education science students at a University of Technology. The evaluation tool focused mainly on the following items: how the lesson plan is completed, actualising learners' pre-knowledge, gaining attention and maintaining interest of the learners, facilitation of teaching and learning through activities, logical progression of lesson, attainment of lesson objectives, assessment, quality of resources, originality and creativity of the presentation. The quantitative data was based on the rating of 1 to 10 by the university lecturer or mentor teacher. To probe the quantitative data further, the participants were requested to reflect on the ratings received per item as evaluated by their mentors/lecturers. The findings indicated both positive and negative perceptions of students concerning their evaluations. Through this evaluation and reflection, this study revealed that pre-service teachers' professional learning can be promoted, and the quality of their teaching enhanced. Based on the results some recommendations on initial teacher training subject methodology and pre-service teachers' teaching practice evaluations were made

Keywords:

reflective practice, student teachers, teacher education

1 Introduction

Teacher training programmes have a difficult task of training quality teachers who will be able to implement the curricula to achieve its intended outcomes. To see to it that these outcomes are met, pre-service teachers are exposed to Work Integrated Learning (WIL) programmes in the form of teaching practice or school based learning.

Teaching practice, according to Thorsen (2016) is referred to as professional experiences that play a central role in teacher education programs (Thorsen, 2016). Professional experience in this regard, is used to encompass the range of approaches to providing opportunities for pre-service teachers to practice and develop their teaching skills in a real school environment (Cavanagh & Thomas, 2013). Amankwah, Oti-Agye and Kwame Sam (2017) refer to pre-service teachers as students who are undergoing teaching training in educational training institutions, on whom the academic success of a nation's next generation depends (Amankwah, Oti-Agye, & Kwame Sam, 2017) .

As an integral component of teacher training programme, teaching practice is aimed at granting pre-service teachers or teacher trainees exposure and experience of the actual classroom teaching. Teaching practice provided to pre-service teachers is aimed at equipping them with skills and competencies required in the teaching profession. This was supported by Akbar (2002) who contended that training provided to potential teachers is to develop in them desirable professional skills, interest and attitude relative to the teaching profession. Akbar further pointed out that it is also to develop in them understanding of educational principles and their implication for learning. According to Gujjar (2010) in Chimhenga (2017), the positive perceptions in teaching practice is concerned with student teachers' growing knowledge and skilfulness, their increasing sense of efficacy, flexibility and spontaneity in their performance and interactions, and the awareness of having achieved reasonable levels of acceptance and recognition amongst the school communication (Chimhenga, 2017).

Past research on teaching practice focused more on challenges and experiences of student teachers during teaching practice, but did not specifically focus on student teachers' teaching practice reflection on the evaluation of assessment grades granted by university lecturers or mentor teachers. Consequently, we have an incomplete picture on the reflections of pre-service teachers' views on the ratings they received from their supervisors who can either be lecturers or mentor teachers' evaluations.

)The supervisory role of a university lecturer or the mentor teacher in teaching practice include as a resource person, an advisor, a general morale booster, an interpreter of

feedback and an assessor (Gujjar A, 2010). Kaphesi (2013) further alludes that these two roles of a supervisor and assessor are contradictory. He further contends that as supervisors, they are expected to observe how student teachers prepare, deliver the lesson and conduct themselves as members of teaching profession and are expected to advise the students on how to improve their teaching skills. As assessors, the lecturers are expected to grade the student teachers by assigning a score based on how the student teacher performs. Subsequently, pre-service teachers' reflection on teaching practice evaluation grading might contribute meaningfully to the "questionable approaches employed in assessing and providing teacher support during practicum" as referred to by Belliveau (2007).

2 Related literature and theoretical framework

Teaching practice as part of experiential learning provides pre-service teachers with the opportunity to demonstrate their ability to apply theory in practice through professional competence; this competence is underscored by critical analysis and self-reflection concerning their practice (Roland, 2017).

Dewey defines reflection as an 'active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds supporting it and future conclusions to which it tends' (Dewey, 1933, p. 9). Dewey's writings seem to suggest that if preservice teachers reflect on their field experiences they will learn about teaching and learning in meaningful ways which will then inform their future actions in the classroom. Indeed, reflection has been a key component of many teacher preparation programs

Dewey's concept of reflection is the focal point in teaching, Schon's (1996) notion of reflection also has been perceived as an important reflective practice. Schon's reflective concept is considered to be knowledge-in-action, which emphasizes that teachers connect and link to their current situations in order to identify and solve issues in the classroom.

Danielson cited in Kahn and Walsh 2006, states that, in order to enhance good teaching practice, student teachers need to reflect on their practice and thus teacher educators need to provide the appropriate means of reflective tools for student teachers.

The level of reflection was descriptive where pre-service teachers reflected-on-action by reporting on the incident based on their teaching practice evaluation. The expected level of development was that pre-service teachers be in a position where they become conscious of their practice. Wickham (2015) opines that it is essential that students demonstrate skill to apply that knowledge in the complex situations that arise in the 21st century classroom. The means that to assess the application of the knowledge that pre-service teachers possess in a classroom setting can be accessed through reflection

(Wickham, 2015). In this way, reflection also gives an opportunity for students to provide qualitative comments on positive and negative aspects of the module. Self-evaluation can hold the key to a more authentic and informed development of our practice.

Assessment strategies

Pre-service teachers are expected to demonstrate that they master the skills acquired through the theory learnt, and also be able to present in a normal classroom in a school setting, unlike in the microlessons where they presented to their fellow classmates. Assessing pre-service teachers during teaching practice is a critical aspect that provides feedback to determine the extent to which instructional objectives have been met. For the purpose of this study, an evaluation tool focused on the ten aspects, namely, how the lesson plan is completed, actualising learners' pre-knowledge, gaining attention and maintaining interest of the learners, facilitation of teaching and learning quality of resources, originality and creativity of the presentation.

3 Context of the study

South African Universities of Technology offer a four-year B.Ed (SP & FET) qualification. Pre-service science teachers specializing in Natural Sciences take a minimum of two science subjects (i.e Physical Sciences and Life Sciences) as major subjects from first to third year level whereas those specialising in Mathematics take Physical Science and Mathematics as their major subjects. These major subjects serve as pre-requisites for their subject specific methodologies which are offered in the second, third and fourth year levels. The main requirement for admission into the Natural Sciences programme is that the candidate should have passed Physical Sciences and Life Sciences with a minimum of 50% from Grade 12. For Mathematics specialization they require at least 50% in Mathematics and Physical Sciences. Therefore, pre-service teachers must have a certain level of grounding in science. Third year B.Ed: FET (SP & FET) Natural Science and Mathematics students of a University of Technology participated in this study. This programme entails four years of full-time study and 22 weeks of work-integrated learning (WIL) in the form of teaching practice across the four years at a Senior phase as well as Further Education and Training (FET) Institution. According to McGee and Cooper (2010) in Bartholomew *et al.* (2011), there is evidence that supports the view that new teachers have a positive impact on their students' learning when student teachers implement the practices they have learnt during their initial teacher education programmes (Bartholomew, Moeed, & Anderson, 2011). It is therefore imperative that new strategies are introduced to enhance pre-service teachers' science teaching efficacy during the initial teacher training, so that this can be one of the attributes they take into the teaching profession.

4 Aim of the study

The purpose of this study therefore, is to conduct an empirical study to find out how the pre-service teachers perceive teaching practice especially the assessment grades and ratings assigned by their lecturers/mentor teachers during evaluations of their classroom lesson presentations. It is in light of this, that this study explored pre-service teachers' reflection on their teaching practice evaluations. Moreover, it sought to explore pre-service teachers' perceptions and reflections based on their mentors' grading of their teaching practice evaluations.

Specifically, this study was guided by the following research questions:

- What is the average rating of pre-service teachers' evaluations per item?
- How do the evaluation grades/marks awarded by the university lecturers and mentor teachers influence pre-service teachers' teaching practice reflections?
- To what extent do pre-service teachers' teaching practice evaluations influence teacher education subject specific methodologies?

5 METHODOLOGY

Research design

This study employed a non-experimental, descriptive and exploratory research design and utilized quantitative and qualitative approaches. Quantitative approach was used to determine average means of the pre-service teachers' grading per item of the evaluation tool. Descriptive statistics was used to analyse data. Qualitative approach enabled was used to describe the nature of pre-service teachers' reflections on the evaluation grading in order to understand the meanings and values students attach to them. Using the qualitative approach, the views of the pre-service teachers about the supervisors' grades and comments were highlighted through reflection of pre-service teachers.

Population

The target population for this study consisted of third year Bachelor of Education students at a University of Technology who had gone for teacher education work integrated learning in the form of teaching practice for the year 2017. The different programmes in this qualification are based on specializations, namely, Natural Sciences, Mathematics, Languages and Social Sciences.

Sample

The participants were third year Bachelor of Education science students at a University of Technology. A convenience sample of Natural sciences and Mathematics was used for the purpose of this study. This sample was used deliberately because the researcher is

the lecturer responsible for Physical Sciences Methodology which is offered only in the two programmes. The final sample included 45 pre-service physical science teachers at a University of Technology. The sample was slightly dominated by female participants (60%) and most of the participants (82%) were in the age group of 20-25 years.

Instrument

The instrument used was the supervisors' teaching practice assessment and evaluation forms with ten (10) items of the teaching practice evaluation tool focused mainly on the following: how the lesson plan is completed, actualising learners' pre-knowledge, gaining attention and maintaining interest of the learners, facilitation of teaching and learning quality of resources, originality and creativity of the presentation.

Data collection

The supervisors' teaching practice assessment and supervision evaluation forms were used to collect data based on the grades student teachers were awarded during their teaching practice at host schools. Qualitative data was collected from the pre-service teachers' reflective journals. Data was collected during school based teaching practice.

Data analysis

De Vos (2002, 339) states that data analysis is the process whereby 'the researcher brings structure and order to the vast amount of data collected, and looks for patterns in the data in order to make sense of it, leading to interpretation and meaningmaking' The ten items were rated from 1 to 10 points. The quantitative data was based on the rating of 1 to 10 by the university lecturer or mentor teacher. Microsoft Excel was used to analyze data for descriptive statistics (means and standard deviations).

The quantitative data was probed by pre-service teachers' reflection on the ratings received per item as evaluated by their mentors/lecturers. Qualitative data was thematically analysed.

6 Findings

Descriptive statistics was used to determine the average means of the items used to rate the evaluations of pre-service science teachers by their university lecturers. The

evaluation tool focused mainly on the following items: how the lesson plan is completed, actualising learners' pre-knowledge, gaining attention and maintaining interest of the learners, facilitation of teaching and learning through activities, logical progression of lesson, attainment of lesson objectives, assessment, quality of resources, originality and creativity of the presentation. The quantitative data was based on the rating of 1 to 10 by the university lecturer or mentor teacher.

Table 1 below gives the means and standard deviation per item. Evidences presented in Table 1 indicate that all of the ten items on the evaluation tool dealing with pre-service teachers' teaching practice evaluation programme were rated above the theoretical mean ($M=5$) by the university lecturers. It must be noted that the lowest scored item was *quality of resources* with mean $M= 6.89$ and the highest scored was *how the lesson plan is completed* at a mean of $M = 7.44$. The range between the highest and the lowest rated means is 0.55. This is an indication of how closely rated the items were. It must also be emphasised that the pre-service teachers were evaluated by different lecturers across teacher education programmes.

Table 1: Table of items of the evaluation tool

Item		Mean	SD
1	how the lesson plan is completed	7.44	1.47
2	gaining attention and maintaining interest of the learners	7.04	1.19
3	actualising learners' pre-knowledge	6.91	1.07
4	facilitation of teaching and learning through activities	7.22	0.98
5	logical progression of lesson	7.13	0.9
6	attainment of lesson objectives	7.11	0.72
7	Assessment	6.95	0.67
8	quality of resources	6.89	1.36
9	Integration of resources/media	7.11	1.35
10	originality and creativity	7.22	1.23
	Average	7.11	0.71

Qualitative data

To probe the quantitative data further, pre-service teachers were requested to reflect on their supervisors' rating based on the evaluation tool. Generally, the participants were content with their marks, except for a few cases where concerns of dissatisfaction were registered in line with the grading.

Qualitative data yielded five themes namely, components of the lesson plan, introduction of the lesson, facilitation, using assessment in instruction and teaching media and resources. The findings from the reflections are categorized with themes that emerged from the items of the evaluation tool:

Theme 1: Components of the lesson plan

Themes that emerged from pre-service teachers' reflection on how the lesson plan is completed include components of the lesson plan and difficulty in lesson plan template as stated in the excerpts below:

"All the components of the lesson plan were included but I still feel that the lecturer could have commented more on the assessments that I gave to learners during the presentation, on assessment I did include a classwork activity and its memo, but still he did not comment on those"

"I can't really say that I am good in lesson planning which is really what annoys me about our work as teachers"

Theme 2: Introduction of the lesson

Pre-service teachers acknowledge that introducing a lesson by tapping into learners' prior-knowledge and ensuring that learners' interest is maintained requires thoughtful planning, it can either make or break the presentation. The following statements indicate that even though some felt that they did well, others still felt that it didn't go well:

"I got less marks even though my introduction moved from the known to the unknown"

"I struggled to have learners' attention as they were making noise at the beginning of the lesson. I greeted them and put the poster on the board which grabbed their attention"

“Gaining attention is easy, but maintaining it is more difficult”

Theme 3: Facilitation

Pre-service teachers showed some dissatisfaction in the facilitation of teaching and learning through activities. This is illustrated by the excerpts below:

“I deserved more because I approached the lesson in a way that learners were able to say what they already know, my approach was learner-centred”

“I deserve more than 7, my lesson progressed from less complicated to abstract concepts, from cells connected in series to parallel connection and combined circuit”

Theme 4: Using assessment in instruction

There were mixed feelings regarding the assessment activities during the lesson:

“My assessment activities were in line with the set lesson objectives, the lecturer commended me and gave me very good marks that I am happy with”

“Learners couldn’t finish classwork and had to turn it to homework, so I cannot really say I deserved what I got”

Theme 5: Teaching media and resources:

A number of positive and negative comments were made on teaching media and resources:

“I do not deserve 8 out of 10 marks, I should have brought a circuit to class so that learners can see the flow of current practically. I did use the class bulbs and switch, but I don’t think they were convincing enough because learners were only able to see two components, the switch and bulb, and no other components which are conducting wires, ammeter, voltmeter and the batteries or generator”

The study sought to explore pre-service teachers’ perceptions and reflections based on their mentors’ grading of their teaching practice evaluations. The findings indicated that the majority of the pre-service teachers who participated in this study perceived their lecturers’ ratings were fair, and the comments that they received post their class

presentations was aimed at encouraging them to improve and enhance their teaching skills. Below are some of the comments from the university lecturers:

The following are some of the lecturers' written comments

"clear objectives, good learner involvement, chart too small"

"detailed lesson plan, specific, measurable, attainable, reliable and timely (SMART) objectives, well preseted lesson"

"clear objectives, good learner involvement, subject mastery"

"lesson could have been enhanced by teaching aids for parallel/series, objective 3 not SMART, understand is not an action verb"

"allow learners to solve problems on board, don't avoid learners' concerns"

"interactive, inquiry based teaching used for learners to construct own knowledge"

7 Discussion

This study explored 45 pre-service science teachers' perceptions and reflections based on their mentors' grading of their teaching practice evaluations. The findings revealed that the pre-service science teachers were generally content with their teaching practice evaluation grades. This is an indication of effective practice in teacher education programs which entails more than just applying knowledge students have learned in their classes (Wickham, 2015). Subsequently, this is based on the overall level of professional development they portrayed in their classrooms.

Reflection allows students to integrate knowledge from practice with continued learning, allowing room for cultivation of the practical skills required in making judgments in the classroom setting. It can be noted from the findings that most of the pre-service teachers were not sure of how to draw the line between actualising prior knowledge and gaining learners attention. Similar findings were also found by Dunlosky, Rawson, Marsh, Nathan and Willingham (2013) in a study based on improving students' learning with effective learning technique (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013). However, this is a skill that they will learn with more practice.

Conversely, some pre-service students felt that they either got more marks than they deserved, or they got less than they expected not consumate to their capabilities. This is precisely because they were evaluated by lecturers who were not specialists in their field of study. The reason behind this is that the university is currently experiencing a large number of students who are placed at different, far away schools to be evaluated within a

certain period of time. It therefore becomes difficult for the allocation of lecturers to be based on subject specialization and it also puts severe financial strain on teacher education departments.

This is in line with Nakpodia's (2011) finding that during teaching practice, student teachers should be given projects, which cover all the aspects of teaching practice i.e. preparation of teaching kit, planning for decoration of classrooms, betterment of environment and provision of facilities (Nakpodia, 2011). For teacher reflective skills, cognitive and pedagogical tools need to be embedded in the curriculum design and curriculum organization of teachers' initial education

The evaluation tool seems to be on par with the international standards of teaching practice evaluations. It captures the five aspects of the Australian teaching practice underpinning the performance an assessment of pre-service teachers. These are, planning effectively (preparing to teach); teaching effectively (enactment of teaching); managing effectively (creating safe and supportive classroom environments); assessing and recording conduct; and professional conduct.

Likewise, the findings of this study are consistent with Charlotte Danielson's framework for teaching underpinned by the four domains i.e. planning and preparation, the classroom environment; instruction and professional responsibilities. This study resonated mainly with domains 1 and 3, namely planning and preparation as well as instruction. The constructs of these domains include demonstrating knowledge of content and pedagogy, demonstrating knowledge of students, setting instructional outcomes, demonstrating knowledge of resources, designing coherent instruction, designing student assessments, communicating with students, using questioning and discussion technique, engaging students in learning, using assessment in instruction, demonstrating flexibility and responsiveness (www.danielsongroup.org). In contrast, some differences were perceived in terms of the student teachers' evaluations regarding the moment of the practicum and the type of supervisor (Caires & Almeida, 2007). It is recommended that the Danielson framework for teaching be embedded in the subject specific methodology/didactics because knowing and being evaluated by the Danielson Framework for Teaching as a pre-service teacher will only benefit them. Because of their knowledge of this framework, the candidates will be able to use a common language to discuss evaluation with their cooperating teachers, and they will be prepared for this type of evaluation when they get hired upon graduation.

8 Conclusion

Supervision during teaching practice contributes to pre-service teachers' education. The supervision of school based teaching practice provides realistic experiences for pre-service teachers and helped them overcome preconceptions of work life. The findings indicated both positive and negative perceptions of students concerning their evaluations. Through this evaluation and reflection, this study revealed that pre-service teachers' professional learning can be promoted, and the quality of their teaching enhanced. This research has limitations because of the size of the sample, the findings cannot be generalized.

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