

Can Lesson Plan Affect Lesson Presentation? A Case of Mathematics Student Teachers' Teaching Practice in Schools

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Abstract. Teacher training programme play a vital role in developing county like South Africa where pressure to improve the quality of education is one of the priority in the country. The aim of this paper is to investigate how student teachers prepare and present their lesson during teaching practice. This paper explored two cases of 2nd year mathematics student teachers at Tshwane University of Technology in South Africa. The data were collected through document analyses such as lesson plan and class observation. The analyses of lesson plan and class observation were guided by the conceptual framework of Teacher Practical Knowledge (TPK). This paper revealed that student' teachers cannot prepare a lesson that can help them to present lesson in the classroom. Therefore, student teachers lack craft knowledge i.e. skills, technique and ability to design a lesson plan that can be useful in their teaching. During lesson presentation the data showed that student' teachers lack action orientated knowledge that can help them to implement their lesson plan into real-life classroom. Therefore, this paper indicated that the way student teachers prepare their lessons can affect classroom presentation. It is very crucial for the university to assess the effectiveness of first year students teaching practice. In addition, to teach student teachers the meaning of different aspects reflected on the lesson plan template provided, how to completed lesson plan and how those aspects unfold in the classroom practice.

Keywords: Teacher Practice Knowledge, Craft knowledge, Action orientated knowledge, lesson preparation, lesson presentation

1. Introduction

Teacher training programme play a vital role in developing county like South Africa which is have a pressure to improve the quality of education. Teacher training should be developed to improving student teachers educational background ; increasing their subject content knowledge; their subjects pedagogical knowledge; knowledge for learners and context; and develop practical skills and competencies (Unesco 2002, 8). Teacher training programme at the Tshwane University of Technology are not exemption from those objectives as it inculcate teaching practical skills into a fundamental part of teacher training programme. However, Büchner and Hay (1999:320) argued that training programme in South African do not sufficiently train and prepare student with adequate skills for the realities of the teaching profession. Marais & Meier (2004:1) argued that “teaching practice is a valued and a very necessary part of teacher education for students to become competent teachers”. Teaching practice represents the variety of activities that student teachers experiences and are exposed to in the schools environment. 'Teaching practice is such a long established practice that it is easy to assume that all those involved in it have a clear notion of what it is and how it should be operated and managed” (Marais & Meier, 2004: 221). Then, it is important to understand the extent to which first year teaching practice experience has prepared student' teachers to plan and present their lesson plan. In this study, the term in-service training and teaching practice will be used interchangeably.

In this context, Students attend their teaching practice for 8 week in a year at schools. Student teachers are allowed to select school that they want to do their teaching practice around South Africa. During teaching practice students are given journals that will guide them and they must also complete them. The journal composed of five (5) components which are also having categories i.e. investigating the role of the educator; teaching activities; record of extra activities; and report on practice teaching. However, this study will only

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focus on component of teaching activities which is having categories of lesson preparation and presentation. This is the main component that the assessor from the university basically looks at and it holds 75% of the overall marks. The overall mark for teaching practice course comprised of 75% of teaching activities + 25% other 4 components = Final mark (100%). Teaching practice subject is a continuous assessment meaning that it doesn't have examination. Therefore, this study investigates the student teachers' mode of lesson preparation and class presentation. The study will not look into the depth of the content knowledge but it will look on how the lesson is prepared and presented.

2. Teaching as a Skill

2.1. The Bridge between Theory and Practice

Teaching practice is developed in the assumption that students bridge the gap between theory and practice. Martinez (1998) argued that students with minimal practical experience find it very difficult to integrate different elements of knowledge that they were exposed to at the university and the practices at schools such as planning and present lesson in the classroom. Correspondingly, Waghorn and Stevens (1996) found that student teachers sometimes find it difficult to relate course content to school content during classroom practice. They further indicated that when student teachers face challenges to relate those content they tend to place theory in one compartment and practice in another (Ibid). Student teachers further indicated that lecturers develop theoretical modules that are confusing, incoherent and also put unnecessary information (Martinez, 1998). They further suggests that lecturers should reduce theoretical component of a teacher education course and more focus on helping students make stronger links between theory and practice. Similarly, McGee (1996) found that teaching practice need improvement in order to bridge the gap between theory and practice. Therefore, to what extend do first year teaching practice experience and course content help the student teachers to prepare and present their lesson?

This study was guided by the notion of "Teacher Practical Knowledge" (TPK) (Carter, 1990). There are many literatures that have been studied to date about Teacher Practical Knowledge and are using various labelling which indicate a relevant aspect of TPK. Those labels illustrate the main important aspect considered by the respective authors. Collectively, these labels aspects give an overview of the Teacher Practical Knowledge. This paper indicated five aspects of TPK found in the literature. Researchers like Elbaz, (1991) identify the aspect of personal knowledge which indicate that this knowledge in unique. The aspect of craft knowledge was also identified as a Teachers' past experiences, the current teaching situation and teachers' visions of how the teaching situation should ideally be (van Driel, Verloop, Van Werven & Dekkers, 1997 and Day & Pennington, 1993). The aspect of Action oriented knowledge was identified by (Carter, 1990) and indicated that is the direct knowledge that must be used in teaching practice. Content and context knowledge indicate the relevant knowledge needed to transfer the subject content in the specific context (van Driel, Verloop, & de Vos, 1998). Tacit knowledge is a personal knowledge which is difficult to transfer to another person by means of writing or verbally (Calderhead & Robson, 1991). This article will focus on two aspects of Teachers Practical Knowledge i.e. Craft knowledge and action orientated knowledge. These aspects helped the researcher to understand pre-service teachers lesson preparations and presentations. Craft knowledge represents the way student teachers prepare lesson which includes lesson design and students perception on ideal classroom while preparing. Action orientated knowledge represents the way student teachers use lesson plan to present their lesson in the classroom which will include achievement of lesson outcomes, use of teaching and learning media, teaching and learning methods, introduction (linking pre-knowledge to new knowledge and relating content to real life situation),body (exposition of new knowledge and actualisation of new knowledge), expanded opportunities, conclusion (wrapping-up the lesson), lesson evaluation (giving additional problems).

3. Methodology

This study is a qualitative research. The aim of this paper is to investigate how pre-service students prepare and present lesson plan based on their experience. As stated earlier, the study focused on pre-service students who are doing second year of their four year degree. During first year of their study pre-service students observe without teaching. Therefore, the researcher looked at how the pre-service students transfer

knowledge that they observe to their contemporary teaching practice. The research question that this study aimed to answer was how pre-service students prepare and present their lesson. Participant for this study comprises of two mathematics students which was conveniently selected from the cohort of students who the researcher was assigned to evaluate. Classroom observation and document analyses were used to collect data with the pre-service students. Classroom observation sheet were developed and analysed using their assessment form to investigate how pre-service students present their lesson. Observation schedule were used to have field notes and lesson plan where analysed as a document using their assessment form to investigate how they prepare their lesson.

4. Findings and Discussion

The findings of this study were presented in terms of lesson preparation and lesson presentation.

4.1. Lesson Preparation

The lesson plan template require students to complete lesson outcomes, teaching and learning media, teaching and learning methods, introduction (pre-knowledge linking with real life-context), body (new knowledge which include teacher activities and learners' activities), expanded opportunities (activities provided for capable and not capable learners of doing what is expected), conclusion (rapping up the lesson and learners assessment). During preparation stage the data indicated that both student teachers' were able to identify lesson outcomes but those lesson outcomes where superficial because they were many to be completed in one lesson. All students were able to identify all teaching and learning media as well as the teaching and learning methods that they will use during their class presentation. In the introduction, Jane didn't indicate the pre-knowledge in the lesson plan but started by explaining "what is linear function", identify formulae that will be used" and "explain the functions presented in the formulae". Kate started by recalling what they did in the previous lesson but she didn't explain how it link with new lesson and how the previous lesson is going to help learners in the new lesson. When preparing the body Jane and Kate were able to indicate new knowledge, they show teacher activities but there were no learners' activities to assess learners' understanding. Both Students used classwork/homework as an actualisation of the new content whereas they were supposed to use it as conclusion. In the conclusion they wrote that "I will conclude by giving learners homework" which was not presented. To evaluate the lesson if it was successful, Jane indicated that she will "give them exercise to do and if they get them right the teacher will know that the learners are capable" whereas Kate wrote that "I will evaluate the lesson by asking learners the questions and if they reply with the correct answer it means they understand". In terms of expanded opportunities both students indicated that for "learners who don't understand, I will keep on repeating until they understand".

It seems like student teachers have more challenge when preparing lesson plan. Student teachers indicate a lack of craft knowledge in terms of knowledge, skills, techniques and ability to prepare lesson plan. In accord with Martinez (1998) and Waghorn and Stevens (1996) student teachers were able to write theoretical lesson plan that they were taught at the university courses but fail to link it with practical exercise.

4.2. Lesson Presentation

The topic that both student teachers presented was linear functions. At the end of the lesson learners are expected to draw linear function using dual-intercepts methods, gradient-intercept method and table method. Jane and Kate were able to cover all the lesson outcomes that they set for the lesson however to what extend do learners understand was not identified. Both student teachers indicated that they are going to use chalkboard, chalk, duster, textbook and T-square ruler but during the lesson presentation textbook and T-square were not used. During the class presentation all students used "teacher centred method" and "question and answer methods" whereas in their lesson plan they proposed "question and answer", "problem solving" and "textbook methods" as their teaching and learning methods.

Jane and Kate started their lessons by explaining all concepts related to the topic very well to introduce the lesson. During introduction phase Kate assess learners' pre-knowledge in passing whereas Jane didn't attempt to ask learners-pre-knowledge. Kate only asks learners if they remember what they did in the previous lesson without doing it. Kate and Jane didn't attempt to link content with real-life context. Both teachers taught learners all methods without continuous evaluation but prefer to give them summative

assessment in order to assess their understanding. This method that student teachers used is not acceptable because they are unable to assess learners immediately and solve any problem that learners experience. In addition this methods lead learners to confusion for example one learner said “you are confusing us” she commented when she hear the teacher saying “let me explain gradient intercept method” while learners are still coping dual-intercept method. Jane used question and answer method to involve learners to participate throughout the lesson whereas Kate was asking them questions but not interested in their respond. Kate wanted to impress the evaluator so that it can be seen like learners are participating. Learners were only asked verbally without been given written task to do, so that they can solve on their own. In contrast foster and Rosenzweig (1995) indicated that learners learn by doing and they can learn from others. Therefore, student teachers have to give learners opportunity to solve problem from previous content so that those who didn’t understand can learn from other. This will also help student teachers to know that learners master the previous content. After teaching all the methods Jane and Kate concluded the lesson by giving learners homework/classwork without conceptualising the lesson and the period was over.

It seems like student teachers lack craft knowledge to prepare a lesson plan that they can put it into action during their class presentation. Both students couldn’t set the lesson outcomes that can suit the duration of the period. Teaching and learning media that were identified during lesson preparation were more superficial because they were not available or not used during classroom presentation. In terms of introduction, during lesson preparation Kate did not indicate the aspect of pre-knowledge but during presentation she talked about it in passing. Jane completely didn’t recognise the aspect of pre-knowledge during lesson preparation and presentation. Therefore this indicates a lack of knowledge, skills and ability to link pre-knowledge into new knowledge as a crucial aspect when teaching. Both student teachers portray a good proficiency in introducing new knowledge in their lesson plan and presentation but they require more techniques on how to assess new content continuously. These signify a lack of skills and accomplishment to orientated knowledge which prevent them to claim that students understood their lesson. In terms of expanded opportunity both Students’ teacher didn’t understand what is expanded opportunities as they thought that “keep on repeating” explanation is to provide expanded opportunity. This statement written on their lesson plan and ineffective action to show how they provide expanded opportunity during their class presentation confirm lack of knowledge in terms of this aspect. These findings harmonize with Martinez (1998) findings that student teachers fail to integrating different aspects of knowledge that they learn at the university modules and practical task. This findings can be view as solution to Kiggundu (2007) findings that student teachers experienced difficulties with the implementation of OBE because of the large number of learners within limited space, lack of appropriate learner support materials, and the limited time allocated for the lessons (at most 45 minutes) as such they could not effectively engage students in group work. This paper reveled that if student teachers can be able to prepare their lesson effectively they can be able to overcome most of the challenges that they experience during teaching practice. Student teachers can be able to learn how they can implement OBE with those large numbers on learners in the classroom, be able to think about learning material available, and use time provided efficiently.

5. Conclusions and Recommendation

An assumption is often made that through adequate academic training and first year observation experience students’ teachers have enough knowledge to practice teaching. This study seeks to understand how student’ teachers use their course theory together with their first year observation knowledge to prepare and present their lesson. The findings revealed that student’ teachers cannot prepare a lesson that can help them in the classroom to present lesson. Data also indicated that student teachers were unable to understand the meaning of the aspects reflected on the template lesson plan provided by the university. Therefore, student teachers lack craft knowledge on skills, technique and ability to design a lesson plan that can be useful in their teaching. In addition they failed to idealise the lesson that they are planning. In terms of the lesson observation, the data showed that student’ teachers lack action orientated knowledge that can help them to implement their lesson plan into real-life classroom. Therefore, this paper indicated that the way student teachers prepare their lessons can affect classroom presentation. It is very crucial for the university to assess the effectiveness of first year students teaching practice. In addition, to teach student teachers the

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