An Exploration of the Assessment and Feedback Practices in a Practical Teaching Intervention for In-service Teachers

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ABSTRACT There is much concern in South Africa about the quality of teaching in our schools, and many teacher development programmes have introduced a classroom support component where in-service teachers are assessed on their teaching practice skills. However, limited research related to the support and assessment functions of such interventions has been published. The qualitative study reported in this paper focused on the feedback reports given to 249 rural mathematics and science teachers as part of the assessment of their teaching practices. The teachers from the South African province of KwaZulu-Natal (KZN) were enrolled on a teacher development programme. The purpose of the study was to explore the nature of the feedback reports that were provided and to assess the value of allocating assessment scores to the teachers. The data were broken down into 1 028 feedback units that were used to generate open codes. These codes were refined into six main categories. The findings reveal that the written comments covered a range of issues related to teacher professional development. However, the majority of the comments did not provide rich opportunities for reflection. It was also found that the scores lay within a narrow range and did not work well in differentiating between a range of competencies. It is recommended that the feedback role of the university tutor should receive more attention than that of the evaluative function of the classroom support visits.

INTRODUCTION

It is common practice, globally, for student teachers to participate in teaching practice experiences which include planning and delivering lessons in schools under the supervision of more experienced teachers or mentors. During these teaching practice sessions, the student teachers' lesson delivery skills can be assessed by tutors or lecturers from their institutions, or by school-based mentors. Higher education institutions spend much time refining the instruments in a bid to develop more reliable indicators of competency as well as tools which could be used to present useful feedback for development of these pre-service students. In South Africa, teaching practice assessments have increasingly also been incorporated into in-service programmes for practising teachers. Policy initiatives for teacher education have also stipulated practice-based assessments such as the 'practical competences' requirement in the previous policy (DoE 2000). The new policy framework in teacher education (DoHET 2011: 8) also specifies 'practical learning' that 'involves learning in and from practice' as well as 'Work-integrated Learning' (WIL) experience (DoHET 2011: 31). Many in-service programmes reflect this focus by incorporating classroom support visits as part of the curriculum, where the in-service teachers are visited and their lesson delivery skills are assessed.

However, a teaching practicum for practising teachers should differ substantially from that for pre-service teachers, in both purpose and assessments. With pre-service teachers, practicum (that is, teaching practice) experiences are meant to introduce them to the practice of teaching, whereas with experienced teachers, the focus should be on reflection and refinement of teaching approaches. Although practical teaching skills are emphasised in teacher development programmes, there are few studies which have devoted attention to issues associated with teaching practice assessments (Sibanda and Jawahar 2012; Bansilal and Rosenberg 2011). Research that can inform others about current practices in this regard is urgently needed so that teacher educator practices can be improved with respect to the design and implementation of the in-service teacher support visits that focus on assessment. It is for this reason that the researchers set about researching the classroom support component of a teacher development programme in a KZN university for rural mathematics and science teachers.

In this paper the feedback comments and assessment scores given by the 22 tutors to the

249 teachers during the classroom support visits, are analysed. The purpose was two-fold: 1) to explore the nature of the written feedback comments and the usefulness of the comments with respect to further development of the teachers, and 2) to consider the value of allocating scores as a measure of the teachers' competence in teaching. Based on this analysis, the aim of the study was also to make recommendations on how this feedback process could be improved. The authors hope to add to knowledge about how classroom support for practising teachers can be facilitated and improved.

Literature Review

As much as it is teachers who provide feedback to their learners in order to provide guidance on how they could improve, when teachers take on the role of learners, they too can benefit from assessment feedback. In this paper the focus is on the written feedback presented to teachers who were the learners in a professional development programme. The classroom support component of the teacher development programme was directed at improving the teachers' classroom practice. The tutors worked with the teachers in their classrooms observed their practices and provided assessment and written feedback on what had been observed.

Assessment as an integral part of education can promote learning if it provides information about the current performance of teachers and their students (Wiggins 1998). Wiggins (1998) asserts that if the purpose of assessment is to improve learners' performance, the methods of measurements must be accompanied by quality feedback. Without effective feedback much of the value of assessment is lost. Sadler (1989: 120) defines feedback as 'information on how successfully something is being done'. In giving feedback, information is provided about how a person performed in terms of what she or he attempted. More specifically, feedback is 'information that provides the performer with direct, usable insights into current performance, based on tangible differences between current performance and hoped-for performance' (Wiggins 1998: 182). These definitions emphasise that feedback involves identifying the gap between where the learners[1] are and where they need to be. It is therefore important that the feedback should provide help on how the gap could be closed by indicating 'what [the] next steps in their learning trajectory should be' (Black et al. 2004: 42).

Hattie and Timperley (2007) emphasise that feedback should include information on learners' strengths. Although certain learners may not need to put any more work into those things they are already good at, such feedback will motivate and encourage learners. However, Slavin (2003: 353) maintains it is important that praise for a job well done should specify what the student did well because praise will not 'enhance interest if it is given in such a way as to promote ego rather than task involvement' (Butler 1987: 481). With regard to written comments, Young (2000) and Black et al. (2004) argue that the value of the comments may be eroded when marks are assigned alongside them because students ignore comments when marks are also given.

The preceding discussion on the role of feedback in learning is also relevant to teacher learning. Like all professionals, much of teachers' learning takes place in practice; however, teacher learning in the classroom can be facilitated when there is a supportive advisor who can encourage and provide feedback to the teacher about effective or unproductive practices. The term 'mentor' is used to describe someone who offers classroom support to a teacher in order to promote good teaching and teacher learning. A South African study by Maoto and Wallace (2006) emphasised the role played by the researcher in supporting the teacher through her planning, discussions and learning. These authors comment that the relationship between the mentor (researcher) and the teacher created the conditions under which the teacher and the researcher were able to learn alongside each other.

In order to promote good teaching, mentors need to provide feedback to their mentees about how they could improve their teaching. Pather (2011: 61) asserts that engaging teachers in collegial support involves providing 'opportunities for contributing, listening, supporting, discussing, giving feedback, reflecting on teaching [and] interrogation of the content by teachers' and thereby contributes to dialogical learning, helping teachers and mentors to reconstruct shared knowledge. Maynard and Furlong (1993) view mentoring as occurring in stages involving apprenticeships, competency and reflection. The apprentice stage is relevant at the beginning of teaching practice, when the trainee teacher works closely with the mentor who acts as a model and assists the teacher in understanding the teaching process. In the second stage, it is the competence model that is most relevant. In

this stage the mentor assumes the role of a trainer and engages the mentee in a more organised training programme that includes observation of lessons and provision of feedback on agreed-upon outcomes. In the reflective stage the mentor takes on the role of co-enquirer in order to encourage a more critical reflection of the teacher's learning.

In South Africa there has been much concern about the poor results in international and national mathematics and science assessments (DoBE 2011; Spaull 2011; Reddy 2006). This concern has led to much interrogation about the quality of teaching in our schools, with some studies suggesting that many teachers were poorly trained and are ill prepared for the demands of teaching (Rogan 2007). These studies suggest that classroom support programmes that can help teachers improve their practical teaching skills as well as content knowledge should be encouraged. The scale of the problem in South Africa is such that it is not sustainable to remove teachers from their classrooms to be trained to improve their practice (NEEDU 2013). Hence there is an urgent need for research that can inform the development of successful programmes which do not require teachers to leave their classrooms. A recent report by the National Education and Development Unit (NEEDU) states that it is evident that 'any school can improve the average level of its own capacity merely by sharing the knowledge held by the best teachers'. NEEDU (2013: 8) has called for increased 'within-school professional development', thus emphasising the need for sharing knowledge. This need has also been recognised the education department that has appointed master teachers who are supposed to act as school-based mentors. However, it is not clear how well the school-based mentor programmes are working (Pather 2011). There is also a need to investigate other models of mentorship provided to teachers. Research can provide guidance to policy makers and teacher development agencies about the limitations and benefits of programmes with different models. This small-scale study is about one component of a professional development programme for rural mathematics and science teachers run by a historically disadvantaged institution. It is hoped that by placing the feedback comments provided by the tutors under the spotlight, other agencies can be helped when they develop similar assessment instruments. This research will also hopefully contribute to debates about the value and features of useful feedback for practising teachers.

Theoretical Framework

This study was focused on the role of mentorship which was interpreted within a situative perspective. A situative perspective is a broad set of understandings which conceptualise the learning process as changes in participation in socially organised activity (Lave 1988). Within a situative perspective, teacher learning is 'understood as a process of increasing participation in the practice of teaching and through this participation, a process of becoming knowledgeable in and about teaching' (Adler 2000: 37).

An example of how learning can be facilitated by increasing participation is the mentoring situation where a mentor supports and offers craft advice to an inexperienced teacher. An important aspect of teacher learning in a situative perspective is the creation of open, non-threatening spaces where teachers can share their experiences and learn from one another. The mentoring situation can lead to increased learning for the mentors as well as the teachers (Pather 2011; Waghid and Louw 2008). In this study, the researchers consider the notion of mentoring as carried out by university tutors who took on the dual role of both mentor and assessor as is common practice in many higher education institutions (Beck and Kosnick 2002)

METHODOLOGY

This qualitative study was conducted using a naturalistic inquiry approach because of its emphasis on interpretive dimensions. The classroom support component under scrutiny in this study formed part of a professional development programme run by a historically disadvantaged university in KZN. The purpose of the programme was to upgrade and retrain rural teachers from northern KZN to teach mathematics and science at Senior Phase (Grades 7-9) level. The National Development of Education set the requirement that teachers were to be provided with classroom support during the programme. In order to make it part of the university quality assurance processes, it was decided that the classroom support component would form part of the assessment. This component was offered as a separate module and therefore needed to be assessed. This was the first experience of the faculty in assessing experienced teachers

on their teaching practices and it was decided that the assessment instrument would be the same as the one that was used for initial teacher education.

The university lecturers (also referred to as tutors) visited the 249 teachers who were based in rural areas in northern KZN. Of these 249 teachers, 98 were teaching mathematics and 151 were science teachers. These teachers were visited three times in the course of their study period: the first visit entailed only observation and verbal feedback. Thereafter reports with an allocated score were generated after each visit. One part of the report contained a series of 21 statements (related to the roles of a teacher) forming a checklist. The 27 tutors were required to tick off the statements, indicating 4 levels of achievement and to provide written feedback comments for each teacher. It is these feedback reports which form the focus of the study.

The data generated by the written feedback were analysed through the process of content analysis which is used to '[cast] additional light on the source of communication [and] its author' (Cohen et al. 2007: 165). In addition, Neuman (2011: 323) states that content analysis is 'non-reactive' because the people being studied are not aware that they are being studied, so 'the process of placing words, messages, or symbols in a text to communicate to a reader or receiver occurs without influence from the researcher who analyses its content'. In carrying out this content analysis, the researchers broke down the tutors' written comments into 'feedback units' (comments conveying a single coherent meaning) and each unit was coded. During the process of data analysis 'data are broken up in order to be classified' (Henning 2010: 128). Breaking up the reports into feedback units enabled the researchers to classify them.

Initially the technique of open coding was used, which refers to '[a] first coding of qualitative data in which a researcher examines the data to condense them into preliminary analytic categories' (Neuman 2011: 461). Open coding brings themes to the surface from deep inside the data (Neuman 2011). The process of open coding was followed by axial coding where these codes were grouped and clustered together until six main categories emerged. The six categories contained comments about 1) lesson planning, 2) teacher pedagogic content knowledge, 3) teacher subject expertise, 4) learner involvement, 5) reflective prompts, and 6) general matters. In order to report on the extent of the trends and patterns, the coded units were then counted. There were, in total, 1 028 feedback units and counting was used as a technique to identify the commonalities across the feedback comments as well as to identify limitations.

This analysis informed the responses to the research questions: What is the nature of the feedback comments given by the tutors to the teachers, and to what extent can these comments be considered as useful for teachers' professional development?

The numerical scores were also analysed, using simple statistical techniques to identify the central tendencies and deviations from the mean of the distribution of these scores. These were then interpreted to make inferences about the extent to which the scores could be considered as valid measurements of the teachers' competencies (relating to the second research question).

RESULTS

In order to provide an overview of the context of these lessons that were observed, a breakdown of the lesson topics is first presented. This is followed by the analysis of the feedback comments which is organised according to six categories. Thereafter an analysis is presented of the scores given by the tutors.

Summary of Lessons by Knowledge Strands

There were 249 teachers altogether: 98 taught mathematics and 121 taught science. The lesson topics were categorised in terms of the knowledge strands as summarised in Table 1.

Table 1: Breakdown of lessons by subject and outcome

Subject	Strands	Frequency
Mathematics	Blank	2
	Numbers and operations	33
	Patterns, functions and algebra	28
	Shape and space	16
	Measurement	9
	Data handling and probability	10
Science	Blank	5
	Life and living	41
	Matter and materials	39
	Energy and Change	26
	Planet Earth and beyond	40

As can be seen from Table 1, the highest number of mathematics lessons was based on numbers and operations followed by patterns,

functions and algebra. For the science lessons, the highest number of lessons was taught in life and living and the lowest number on energy and change.

Information about the grades in which the lessons were taught is provided in Table 2.

Table 2: Breakdown of lessons by subject and grade

		Frequency of lessons in each grade					
		4	*5*	*7*	*8*	*9*	*11*
Subject	Maths	1	0	77	9	10	1
of	Science	0	1	122	16	12	0
Lesson							

Table 2 shows that of the 249 Senior Phase teachers that were observed, 80% of the lessons were taught in Grade 7, 10% in Grade 8 and 9% in Grade 9. The analysis of the feedback comments now follows.

Nature of the Feedback Comments

As explained in the methodology section, the various feedback comment units were categorised into six categories, which emerged from the initial analysis. These six categories are described, followed by a graphical representation of the number of comments in each category (Fig. 1). A detailed discussion of the comments in each category is subsequently provided.

The supporting comments that are presented are attributed to the various teachers by indicating whether the subject was mathematics (M) or science (S), followed by the number of the report. For example, S17 indicates it was report number 17of a science lesson.

Presentation of Categories and Overall Results

The six categories that emerged from the data are

1) Planning Aspects of the Lessons

Writing out lesson plans is an important task of the teacher because it sets out what the teacher intends to achieve, what she or he will do to get there and how, as well as how the success of the lesson could be gauged. An important component of classroom support visits should there-fore include a scrutiny and discussion of the proposed learning trajectories. This category considered those comments about the teachers' written plans, or suggestions on how they could improve a certain aspect of their planning. There were 119 comments that referred to aspects about planning.

2) Pedagogical Content Knowledge (PCK)

Shulman (1986: 9) describes pedagogical content knowledge as the 'subject matter knowledge for teaching [and] the ways of representing and formulating the subject that make it comprehensible to others'. This definition captures the crucial role of the teacher as a mediator of learning. Under this category, the researchers considered the comments made by the tutors relating to the teachers' pedagogical content knowledge, lesson presentation, explanations, questioning, methods, activities and the follow-up assessments. There were 475 comments in this category.

3) Content Knowledge (CK)

A sound knowledge of the content is a tool without which the teacher cannot perform his or her task. In South Africa, many studies have reported that teachers have a poor conceptual understanding of mathematics and science which limits their interpretation of the curriculum and their attempts at mediating the content with their learners (Mji and Makgato 2006; Taylor et al. 1999). This category consisted of those comments relating to the content knowledge of the teachers. There were 59 such comments.

4) Learner Involvement

Critical to any discussion on learner-centred classrooms is the extent of involvement of the learner. This category consisted of comments which made references to learners' participation, behaviour or disposition. There were 166 comments in this category.

5) Dialogic Comments

Opportunities for reflection are significant elements of teacher learning. In this category the researchers considered those comments made by tutors that went beyond assessing the

lesson but were an attempt to get the teacher involved in a conversation by inviting him or her to reflect about some issue. These prompts were aimed at engaging with the teachers as colleagues and co-enquirers. There were 61 such comments.

6) General Comments

Another category was called non-specific comments about the lesson presentation. This category emerged when it was found that many tutors made general comments such as 'This was a good lesson' but did not provide specific details about what it was that made the lesson good. There were 148 of this type of comments.

The distribution of comments according to these categories is represented in Figure 1.

The bar graph in Figure 1 reveals that the largest category of the comments (46%) was teachers' pedagogic content knowledge, which is reasonable considering that these visits were meant to help teachers improve their classroom practice. It is of concern that only 6% of the comments were what we termed dialogic comments, aimed at leading the teacher to engage in conversation or inviting some introspection about specific issues. Twelve per cent of the comments were about technical aspects related to the writing up of lesson plans. The second highest category was that of general statements,

which did not provide any specific guidance about what was or was not working well.

The various comments given by each of the 27 tutors were quantified in order to check for patterns amongst individual tutors. The assumption was that teachers who elicited a larger number of comments would have a richer source of advice upon which they could draw for their reflection and growth. In terms of comments with specific advice (excluding the general statements) Table 3 reflects the number of useful comments made to teachers.

Table 3: Frequency of reports with a particular number of feedback comments

Number of comments	Frequency
0	1
1	29
2	53
3	43
4	47
5	49
6	17
7	5
8	2
9	1
10	1
11	1
Total	249

It is evident that there was one report that did not contain any direct or specific comments
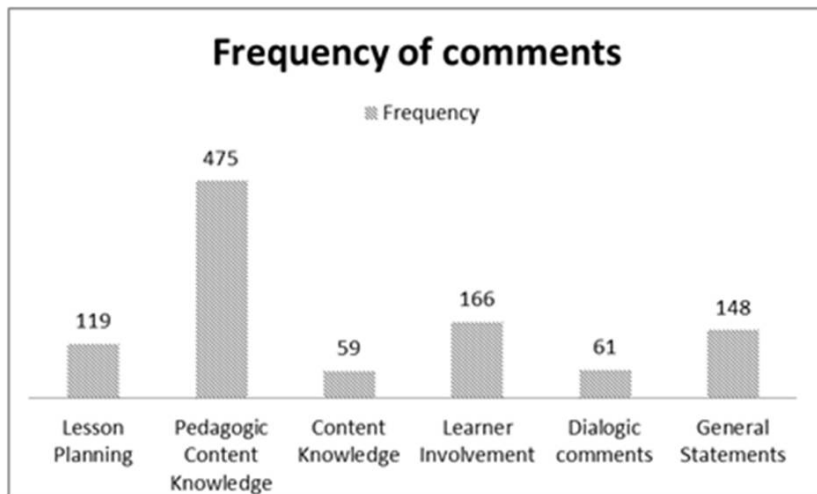

Fig. 1. Bar graph showing frequency of comments per category

on exactly what worked well or what did not. It only contained one bland statement: 'Well presented lesson' which did not give the teacher any issue to reflect upon for further growth. There were 29 reports that made only one useful comment, while there were 53 with two comments. This means that 83 teachers received two or less than two feedback comments about what they were doing well or how they could improve. Since feedback is the most important component of assessment for teachers these comments were virtually meaningless and disappointing to the teachers. All the other teachers received three or more useful comments which they could use to improve their future practice. There was one report in which the tutor made 12 points about the teacher's teaching, giving the teacher much food for reflection.

Comments about the Planning Aspects of the Lesson

Tutors made 84 suggestions about how the planning of the lessons could be improved. Some were technical suggestions about the absence of a learning programme, lesson file, or work schedule. Others were more critical of the lack of detail in the written plan concerning the various stages of the lesson. For example, one tutor wrote, 'Your planning must be very specific to this lesson. Separate activities into introduction etc.' (M70). This comment suggests that the teacher did not provide sufficient details about the sequence of activities and connections between the parts of the lesson.

Another tutor emphasised the importance of planning at three levels: 'Ensure that both the learning programmes and work schedules are completed before completion of your lesson plan. All three levels of planning are vital as each level informs the next' (M1).

A common concern of tutors was that the outcomes of the lesson were often not evident. Being clear about what one wants to have achieved by the end of the lesson is an important element of the planning because the lesson is then centred on the achievement of these outcomes.

Another aspect that emerged was that of sequencing and pacing. One tutor wrote, 'I am surprised that you are still teaching this topic … does it mean that you do one thing for 5 months?' (M3). In this instance the tutor's concern was about the pacing, because it seemed that the

teacher should have moved beyond teaching the topic of common fractions, decimals and percentages in the past five months. This comment was based on the previous visit of the tutor when she noticed that the teacher was teaching the same topic. The teacher had not provided sufficient details of the topics of the other lessons.

The tutors also made positive comments about aspects of the planning. Thirty five 35 positive comments were made by tutors about some aspect of the teachers' written plans. Examples of such comments are: 'The lesson outcomes were unpacked clearly' and 'Good and appropriate examples were given' (M27). Another example that was categorised under positive comments on planning was: 'Work schedule shows progression in development of topic' (S20).

Comments about Pedagogical Content Knowledge (PCK)

Overall, the tutors voiced 294 affirmative comments and 181 criticisms about the teachers' pedagogical approaches, which raised important issues about the teaching and how they could be improved. Within this category sub-themes were identified that were focused on the introduction to the lesson, the methods employed, the suitability of the activities and examples, as well as opportunities for participation.

Many tutors made comments about the introduction of the lesson. A common complaint by tutors was that the outcomes were not communicated to the learners, for example: 'The lesson outcomes were not unpacked so that learners are aware of what will be expected of them' (M57). This comment demonstrates that the tutor was able to offer reasons for his negative comment.

Another common criticism about the teacher as mediator concerned the use of English as the language of teaching. One tutor wrote, 'She needs to improve her medium of instruction' meaning that the teachers' explanations were not clearly articulated in English. A similar comment was: 'Pay attention to language errors that occur when speaking' (M62).

Other aspects that were commented upon were about the activities used by teachers: 36 comments focused on the types or suitability of the classroom activities used by the teacher. For

example, one tutor voiced disappointment that the 'lesson was taught in a de-contextualised manner' (M27) without drawing upon relevant real-life examples that learners could relate to. Another tutor (M37) similarly mentioned that the teacher could improve on drawing upon context using real-life examples. This was noted in regard to a lesson based on measures of central tendencies such as mean, median and mode which only make sense when they are interpreted within the context of its application. By directing the attention of the teachers to elements of effective teaching that were not present and by offering suggestions on what they could have done the tutors were providing specific feedback on how they could improve.

Some comments were related to the relevance of the assessments: 'The class work was relevant to assess the achievement of the lesson outcome' (M72). There was also a comment about the value of building upon the previous knowledge of learners: 'You were able to recap learners' previous knowledge as a foundation for the lesson' (M74). These PCK comments were meant to affirm the value of certain actions and were therefore meant to help the teachers learn from their practice.

Comments about Content Knowledge

There were 44 negative comments about teachers' content knowledge. In one case the tutor pointed out that the answers to all the questions that were given by the teacher were wrong: 'The answers you were giving were all wrong […] make sure before you go into the lesson you have correctly done the work and have your peer or mentor to check your answers to avoid confusion in the class' (M4). This is a cause for concern, especially because the topic was solving equations in a Grade 7 class, which was most likely about solving number sentences since the solution of formal algebraic equations is not treated at that level.

Another tutor (M5) pointed out that the definition of a quadrilateral was given as a 4-sided figure with two opposite sides equal, which is not correct. In one science lesson a tutor (S2) wrote, 'It is not right to say that energy can be transferred into another kind of energy, make sure that you clearly distinguish between energy transfer and energy transformation.' One tutor pointed out that the teacher was making references to certain content that had not been explained before. She recommended that the teacher should have summarised some of the important definitions of figures on the blackboard so that the learners could follow the teacher's explanations (M6). These comments capture some of misconceptions of the teachers themselves, thereby providing specific learning opportunities for them, demonstrating the value that classroom support visits can hold.

Positive comments about content knowledge were far and few between with less than 6% of the teachers receiving commendations about their mathematics or science content knowledge. Some examples of comments which were not very specific were: 'The teacher displayed good knowledge of the subject' (M45); 'The teacher displayed mastery of the subject area' (S32); 'The teacher could simplify the content with ease' (M20).

There were also content-related affirmative comments which pointed to specific aspects. For example, one tutor commented on the specific resource that was used to teach fractions: 'The fraction grid was used effectively to compare the fractions showing which was bigger or smaller, or equal to' (M73). The same tutor praised another teacher's use of different methods: 'It was good that you demonstrated more than one method of adding mixed fractions' (M74). The specificity in the feedback comment is very useful for the teachers, because it pointed out exactly what was being praised.

Comments about Learner Involvement

Tutors made 113 positive comments about learner participation, one of which was: 'The learners were active and participating meaningfully' (M37), while there were 53 other comments about learners not being involved meaningfully, such as: 'There was very little learner involvement' (M48). Another tutor's suggestion was to 'engage learners and allow them to respond' (S89). The tutors evidently regarded the meaningful engagement of learners as a priority by directing the attention of the teachers to this crucial aspect of teaching. Drawing attention to this aspect by using a negative or positive comment is effective feedback because it specifically points out an area that may need further development.

Some tutors drew attention to the widespread use of learners answering in chorus. For example, it was suggested that the teacher 'guard against learners answering in chorus fashion' (M35). Chorus answers may be useful in certain instances such as when learners are practising new terminology; however, it is a harmful practice when used on a large scale because it detracts learners from engaging individually with the concepts.

Discipline issues were also reported: 'The educator does not focus on disciplining the learners' (S73) and 'Learners are a bit noisy' (M67). One tutor requested a teacher to be 'strict with learners who seem to tease [a learner] who couldn't do the sum' (M57), alerting the teacher to practices that could potentially lead to harassment or bullying.

Dialogic Comments

There were 61 comments overall that were categorised as dialogic comments which were intended to engage the teacher in conversation about the observations. Examples of such comments were: 'Good questioning, reminding learners about vertical and horizontal' (M69). While being affirming, this comment was made in a conversational tone in a manner that engaged the teacher.

Another such comment was: 'Children seemed to understand coordinates, although they could not define it' (M69).

One tutor posed a question (M70): 'How else could you have assessed this?' Here the tutor is asking the teacher to reflect on an issue.

Another comment reminded the teacher about key information regarding a cylinder: 'Remember that the glass is a cylinder, and the base is equal to a circle; don't forget the 2D/3D difference' (M68). In this comment, the tutor was also in conversation with the teacher, and points out pertinent properties without making a judgement.

The comments provided above show that the teacher is regarded as a colleague and it seems as if the tutors were in dialogue with the teacher. There were also negative contemplations regarding the lesson, such as: '… it seems like the lesson you presented was given to you by someone else,' implying that the teacher seemed to be disconnected from what she was doing. The comment was intended to get the teacher to become more involved in the lesson. Another example given by S13 was: 'According to the les-son plan, learners are supposed to construct their own knowledge, but how is that supposed to happen [if learners are not actively involved]?' Here it seemed as if the tutor was being rather sarcastic and reminding the teacher about the constructivist theory of learning which they had encountered in the formal courses in which they were enrolled.

These dialogic points were meant to encourage reflection and are important elements of written feedback because the teachers keep the reports with them and the tutors' comments would provide stimuli for reflection that could result in changes in the way they introduced a topic, designed an activity, sequenced a series of lessons, or involved learners. Comments such as those by M68 could also lead to a deepening of teachers' content knowledge.

General Comments

It seems as if many tutors resorted to general comments (In other words, not specific) as a motivational tool to keep the teachers happy. There were 148 such comments. In a situation where teachers are left with written feedback that can act as a stimulus for further reflection about their development, comments which do not convey any information about specific aspects are not very useful in the situation. There were almost three times as many of these general comments compared to dialogic comments that could encourage reflection; therefore it seems as if tutors found it easier to write these non-specific comments than to engage with the teachers in a reflective manner. Although most of these comments were in the form of praise, the literature (for example, Slavin 2003) suggests that praise should specify what the student did well. After this presentation of the details of the comments, an analysis of the assessment scores is provided below.

Analysis of Marks Given by the Tutors

It is of interest to look at the distribution of the 249 assessment scores allocated by the tutors as presented graphically in Figure 2.

The graphical dot plot display in Figure 2 shows that most marks were clustered around the 60 to 80 range. It shows that 83% of the teachers had marks between 60 and 80. The commonest mark (mode) was 70, with 26 teachers achieving that mark, with the second most
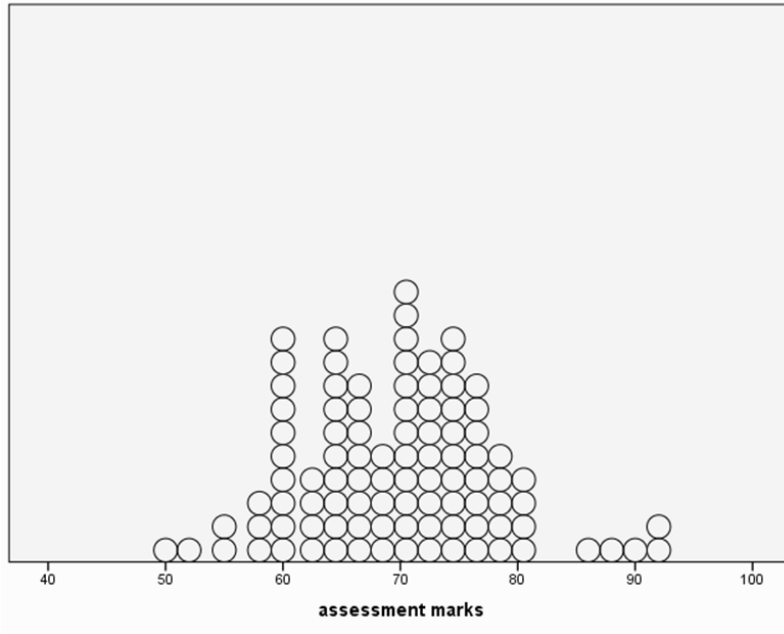
Fig. 2. Dot plot showing distribution of assessment scores

common mark being 60 (17 teachers). This graph-ical display suggests that there were certain scores the tutors felt more comfortable with. There were only 21 teachers (8%) who obtained a mark of 80 or above (8%), while only two peo-ple obtained less than 50.

After considering the marks allocated by each of the 22 tutors, an average score was calculat-ed. It was found that 85% of tutors allocated an average mark of between 64 and 75 marks. The scatter graph below (Fig. 3) illustrates this spread.
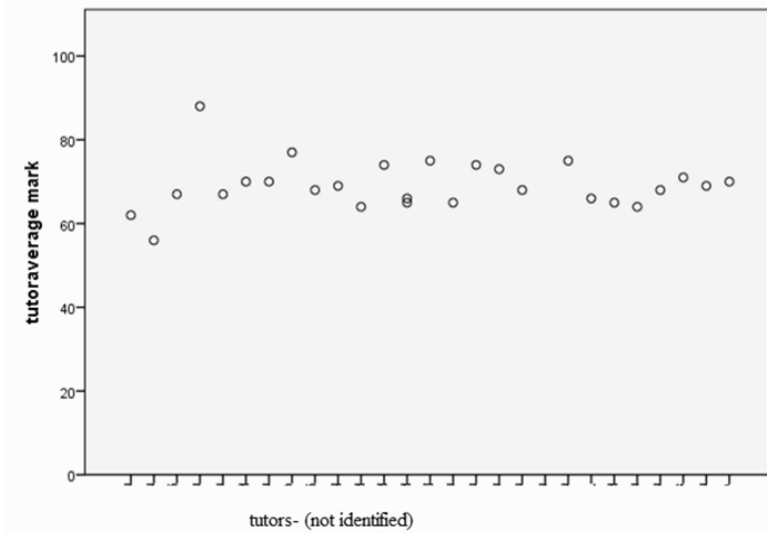

Fig. 3. Scatter graph showing spread of average marks allocated by the 27 tutors

This suggests that most tutors felt comfortable with allocating marks within this range. The researchers looked at the difference between the highest and lowest score and called this the *tutor spread* of marks. This value quantifies the range within which a tutor allocated marks. For example, if tutor A had a tutor spread of 10, then it means that the difference between the highest and lowest marks given by tutor A was 10. The difference between the highest and lowest marks for all 249 teachers was 62, constituting a large spread. For individual tutors, however, most (70%) stayed within a safe tutor spread of up to 20 marks. This means that for 70% of the tutors the tutor spread was 20 marks or less. These data suggest that there is a clustering of scores around a range with which that tutors were comfortable, and not an objective measurement of teachers' competence. It is acknowledged that quantifying teachers' competence using a numeric scale where a higher percentage implies a higher competence is a difficult task, and would require much research and empirical testing before such an instrument can be validated. It is the researchers' view that until such a stage can be reached, a mark or score for such classroom support visits is not useful. This view is based on research (Black et al. 2004; Young 2000) suggesting that marks may act as a distractor by moving the teachers' attention away from the written feedback they were given.

DISCUSSION

There are some issues arising from the data that need to be foregrounded. These data are related to the nature of the tutors' comments, concerns about support needed by the teachers, and the issue of providing a score as part of the assessment.

The tutors' feedback comments were on issues that were closely related to teachers' professional knowledge, such as their content knowledge and pedagogic content knowledge (Bansilal and Rosenberg 2011). A situative perspective suggests that teacher learning is enhanced as teachers are supported in increasing their participation levels in a community of practice. Thus it is clear that in providing feedback about aspects of their professional knowledge the tutors have tried to contribute to the teachers' learning.

However there is room for improvement with respect to the actual feedback comments. Regarding the spread of the comments, it was found that out of a total of 1 028 comments, 148 were general or non-specific and did not provide details about the particular aspects of the lesson that were being praised or criticised. These comprised a significant percentage (14%) of the total comments. Research suggests that feedback should provide the learners with information about their current performance, since the purpose of feedback is to promote learning (Wiggins 1998). Comments that are meant to prompt some reflection or introspection by the teacher about how well something worked or did not work would be more valuable, considering that these were practising teachers and not newcomers to the profession. However, the data showed that the frequency of reflective prompts was less than half that of the non-specific statements. Halai (2006) suggests that encouraging reflection by the teacher is a significant aspect of a mentor's role, which is what was expected from the tutors in our study. Such comments could be focused on alternative approaches, or alternative understandings of a concept by the teacher or by the learner. It could also include questioning the value of certain interventions, teaching styles, or questioning styles, amongst other things. Timperley (2001) contends that conversations between mentors and mentee teachers done in a collaborative way help to improve the quality of the conversations. This implies that if mentors establish rapport with mentees, then the level of discussion is heightened, which consequently permits a higher quality of feedback that is accepted as in a relationship between colleagues. Maynard and Furlong (1993) suggest that mentoring occurs in three hierarchical stages with reflection being the final stage, where the mentor takes the role of co-enquirer in order to encourage a more critical reflection of the teaching and learning of the trainees. It is suggested that tutors might be offered some training on the purposes and value of feedback in assessment and how they can improve their feedback skills. It is also essential to delineate the difference between the usual situation of assessing pre-service teachers and that of assessing in-service teachers.

It can be noted that in at least 113 lessons learner participation was observed, which suggests that almost half of the teachers tried to

move beyond the traditional 'teacher as boss' model. However, there were 53 lessons in which the mentors were disappointed with the extent of learner involvement. This suggests that these teachers need more support in trying to elicit meaningful learner involvement in their lessons. Furthermore, there were more negative suggestions about lesson planning than positive ones, suggesting that teachers may need further help in planning their lessons. Good planning is necessary for the success of any lesson. There are studies which suggest that many South African teachers pay scant attention to planning (Bansilal and Rosenberg 2011; Khumalo 2011) and need help in planning (Sibanda and Jawahar 2012). It is disappointing that after the end of the programme none of the mentors would have visited the teachers again, thus it is likely that these rural teachers will not receive the necessary support they need in order to help them close these gaps that they have. Research suggests that many teachers are not receiving adequate classroom support from either their heads of department, school mentors, school management, subject advisors or other agencies (Khumalo 2011). This demonstrates the need for the various stakeholders to work co-operatively so that teachers can get support at the site they need it most. If teachers have support from teaching experts who help them progress on their personal learning trajectories, opportunities for learning could be maximised.

CONCLUSION

This paper reported on a study which analysed the feedback reports given to 249 rural mathematics and science teachers as part of the assessment of their teaching practices, in order to evaluate the effectiveness of the feedback comments. The findings suggest that the tutors needed more training on how they could better support the teachers. Participation in a workshop by all tutors before they carry out the visits may help them develop a shared vision of what they want to accomplish and how best this could be done.

The analysis suggests that the allocation of marks is not working well in terms of providing a spread of marks which can be used to differentiate between levels of competence. It is suggested that such visits could possibly be used for support purposes, where the university tutor's

role as a mentor supersedes that of an evaluator. The evaluative aspects could be simplified to identifying whether a teacher has developed to the extent of being able to teach effectively without needing further interventions or whether the teacher needs more intensive support. If a teacher is identified as having poor teaching skills, the teacher should be provided with further visits and intensive mentoring in order to help him or her develop further. However, removing this element may create other limitations on the role of the mentor or tutor. This is a matter that needs more debate.

It is hoped that the sharing the results of this fine-grained but small-scale study on the feedback provided to practising teachers as part of a professional development programme, has provided some insight into issues surrounding the provision of classroom support for practising teachers, which has also been cast into the spotlight by the recent NEEDU report of 2013.

NOTES

1 Note that learner is used here in this paper in the more general sense of anybody who is learning, and not as a school going pupil

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