Journal of Education, 2016
Issue 66, http://joe.ukzn.ac.za

The what and how in scripted lesson plans: the case of the Gauteng Primary Language and Mathematics Strategy

Yael Shalem, Carola Steinberg, Hannchen Koornhof and Francine De Clercq

(Received 25 April 2016; accepted 9 November 2016)

Abstract

Lesson plans are advocated as useful forms of teacher support because they can expand a repertoire of teaching practices. But what kinds of scripted instruction can effectively guide and improve teachers' instruction and how can lesson plans achieve that? This article examines the nature and purpose of the scripted lesson plans (SLPs) used in the Gauteng primary education system and then investigates how teachers enacted these routinised SLPs. Through a review of the literature on teaching English language and on SLPs, the article assesses the opportunities and challenges afforded by the Gauteng Primary Language and Mathematics Strategy's (GPLMS's) lesson plans for Grade 3 English as First Additional Language (FAL). Then, through an analysis of an English FAL lesson taught differently by two teachers, it points to the many professional judgements made by the teachers as they enact the prescribed teaching routine. Our analysis suggests, firstly, that the knowledge resources given to teachers need to be considerably more detailed and, secondly, that teachers need strong subject matter knowledge to transmit the conceptual relations that underlie the teaching routines of the lesson plan.

Introduction

The Gauteng Primary Language and Mathematics Strategy (GPLMS) was a four-year, large-scale, government-based, literacy and numeracy intervention (2010–2013) targeting underperforming primary schools and is considered the most innovative recent development programme in South African education. Learners' poor results on annual national assessments (ANAs) and growing evidence of unstructured teaching practices, in particular in terms of lesson planning, pedagogy and inadequate curriculum coverage, gave rise to this multi-pronged intervention (Botha, 2014; Fleisch & Schöer, 2014).

Championed by the Gauteng MEC for Education in 2010, the GPLMS targeted close to 12 000 teachers in 1 000 primary schools that scored below the provincial and national average learner results. The aim was to increase the Grade 3 and 6 pass rate of languages and mathematics in the Foundation and Intermediate Phases from below 40% in 2010 to at least 60% by 2014 (GDE, 2010) through improved teaching and a reduced gap between the intended and enacted curriculum. The intervention was considered successful and was incorporated into the structures of the Gauteng Department of Education (GDE) in 2014.[1]

The main feature of the GPLMS were scripted lesson plans (SLPs) for the subjects of Mathematics, Home Language (versioned into the 11 official languages of South Africa), and English as a First Additional Language (English FAL). The SLPs were accompanied by graded readers, phonics tables, posters, workbooks for learners, 'just-in-time' training and 'ongoing in-class coaching' for teachers. Coaches observed teachers and acted as critical friends, modelling the new teaching routines and assisting with how to plan, prepare and deliver the SLPs. When the intervention moved into a second phase inside the GDE,[2] the district subject advisors and school-based HoDs were tasked with the coaches' role of supporting and monitoring teachers. This has made GPLMS SLPs a central feature of these primary schools.

The lesson plans for English FAL translate the weekly content and skills set out in the Curriculum Assessment Policy Statement (CAPS, 2011) into core teaching routines ('Greetings', 'Phonics', 'Listening and Speaking', 'Shared Reading', 'Group Guided Reading', 'Language Use'), and specify the pacing of the learning activities with strict daily timeframes, standardised for the whole school year. The SLPs provide content, questions, activities and forms

---

1 The idea for this paper developed from a critical review of the professional development programmes which the Gauteng Department of Education (GDE) introduced in the first 20 years of democracy (De Clercq and Shalem, 2014). The main finding of the review was that until 2009, most of the programmes were targeted at the improvement of a few discrete aspects of teacher practice, to comply with a new curriculum framework. Around 2009, the GDE turned towards scripted teaching in the form of standardised lesson plans so as to engineer a whole new practice for teachers in order to improve learners' results.

2 This second phase incorporation was rather controversial for some GDE district officials who did not want SLPs in their schools. In addition, the training of school-based HoDs and district subject advisors to assume the coaches' role was relatively neglected.

of assessment. They are aligned to formal assessment materials (e.g. assessment tasks, mark sheets) and refer to government-produced/prescribed learners' materials.

By embedding core teaching routines sequentially into a full lesson plan, the GPLMS developers hoped that teachers would be enabled to "improve time on task and establish new daily and weekly routines" (Fleisch and Schöer 2014, p.3). The plans are designed as "a practical mechanism to provide knowledge resources to teachers in a direct manner" (NEEDU 2013, p.62) and provide "systematic, paced, and easily accessible lessons for the teachers to follow" (Fleisch and Schöer 2014, p.3).

Although evidence cannot yet determine which component of the GPLMS intervention was most effective (Fleisch and Schöer, 2014), benchmark test results show that the lower-performing schools in the GPLMS have improved their scores. Small-scale research evidence, based largely on interviews with teachers, shows that some teachers feel they are slowly developing more productive teaching routines of coverage and pacing (De Clercq, 2014) and that coaches were instrumental to teachers' understanding and interpretation of curriculum documents (Masterson, 2013). The most recent randomised evaluation of a 9-month implementation of home language SLPs in Setswana (Cilliers, Fleisch, Prinsloo, Taylor, & Van der Berg, 2016) in poor schools showed that the worst-performing learners benefited less from the intervention, and that better-performing teachers improved more. The researchers suggest that for schools located in resource-constrained environments, "the lesson plans need to be further simplified to benefit those schools" (p.13). At present there is no research which examines how teachers enact these SLPs nor in what ways their enactment is guided by the lesson plans and in what ways by their teacher knowledge.

The double question this paper addresses is: what knowledge resources do the GPLMS SLPs make available for teachers, and what teacher knowledge do the SLPs assume for enactment? We believe that this is an important question in view of research which consistently shows that gaps in teacher knowledge is a major influence on the teaching and learning in underperforming schools (Hoadley, 2012; Taylor and Taylor, 2013). Drawn from ten lesson observations and selected interviews with five teachers who participated in the GPLMS intervention, this paper focuses on the enactment of SLPs by two Foundation Phase (FP) teachers. The lessons were taught in 2015, the second year after the coaching component was terminated.

In this paper we first locate and assess the English FAL Grade 3 SLPs in terms of two debates: on teaching grammar as an aspect of teaching reading and writing, and on the purpose and nature of SLPs. Then we examine two teachers' different enactments of the same lesson plan, namely an English FAL Grade 3 lesson on the topic 'countable and uncountable nouns', analysing the decisions they made regarding the content and their modifications of the SLP. The two teachers worked with the same lesson plan on the same day, thus enabling the opportunity of an in-depth comparison.

Teaching grammar in First Additional Language (FAL)

Tracing the history of the 'grammar wars' in England from the 1950s to the 1970s, Clark (2005, p.33) analyses how the government policies "abandoned the teaching of standard English grammar and canonical English literature". She argues that "creative writing, spoken English and contemporary fiction which reflected students' experiences", took the place of grammar, with very little attention to "accuracy and correctness". When in the 1980s, a different government attempted to re-introduce 'traditional' grammar teaching, they faced opposition at schools, where teachers did not want to return to a pedagogy of "mechanistic drill", and at universities, where traditional grammar had been "linguistically discredited" (2005, p.42) by systemic functionalists, who emphasised the meaning conveyed by grammatical structures. This led to an ongoing educational debate about why and how to teach grammar as an aspect of language teaching – pitting the traditionalists, who wanted the formal properties of language to be taught as a separate component of English against the socio-linguists, who emphasised the social nature of language and situated learning. A mediating force were the systemic functionalists who argued for language teaching to include a systematic presentation of language structures as embedded in the meaning conveyed by a text. This three-cornered debate was often simplified into opposing binaries – traditional vs. progressive, standard vs. geographic-determined forms of English, abstract vs. contextual teaching, rote-learning vs. understanding, form vs. meaning, phonics and grammar approach vs. whole language approach, grammar rules vs. language awareness, etc. To overcome the binaries, Chall (1967, in Stahl 2001) suggested that a 'mixed approach' would be a more desirable methodology, which has become a generally accepted route for curriculum and learning materials developers.

The English home language grammar debates have influenced international debates about how to teach English as a foreign/second/first additional language (EFL, ESL, FAL), generally favouring a communicative approach. But even the most communicative approaches put some grammar into the mix, because when learning a new language, an understanding of basic grammatical structures is necessary to provide the knowledge of "how some lexical items should be combined into a good sentence so that meaningful and communicative statements or expressions can be formed" (Widodo, 2006). Heugh (2013, p.15) puts forward a stronger position. She warns that communicative language and whole language approaches to teaching English do not work for second language "poor, working class, urban" or "indigenous" school communities, because they are "misunderstood to mean an emphasis on spoken language rather than reading and writing" and they "make no allowance for children from homes with limited literacy practices". This is particularly an issue in South Africa, where for young children learning English FAL is intertwined with the acquisition of reading and writing.

The National Curriculum and Assessment Policy Statement (CAPS) (2011, p.8) promotes an "additive bilingualism", so children in Grade 1 "learn to read and write in their home language" on the assumption that they have a strong oral foundation in it, and then simultaneously "listen to and learn to speak English as an additional language". This is in preparation for "learning to read and write English in Grades 2 and 3", and then "using English as the Language of Learning and Teaching (LoLT) in Grade 4". Yet providing only three years for building learners' bilingualism is unrealistic because it does not allow for academic proficiency to develop in a second language. Reeves, Heugh, Prinsloo, MacDonald *et al*. (2008, p.2) argue that "language and literacy acquisition and development *anchor* subsequent cognitive development and academic proficiency". They draw on Cummins (1977) who makes a distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). CALP is the kind of language proficiency necessary for engaging with academic concepts in the language of learning and teaching (LoLT). According to Cummins, BICS can be acquired relatively quickly, whereas, even under optimal conditions, CALP requires six to eight years. What supports the acquisition of CALP for learners of a second language is a strong foundation in the reading and writing of their home language (to allow for the transfer of linguistic knowledge and literacy strategies to the second language), immersion in the second language at school, and suitably competent teachers of English as a

second language who simultaneously strongly validate learners' home language (Heugh, 2013). These conditions are generally absent in South Africa.

For Grade 3, the CAPS English FAL allocates time for Listening & Speaking, Reading & Phonics, Writing and Language Use. Language Use should provide "a good knowledge of vocabulary and grammar" (2011, p.17) i.e. 1500–2500 words, plus simple present, present progressive, simple past and future tenses; countable and uncountable nouns; the articles 'a/an' and 'the' with nouns; the possessive form of nouns; there is/are; comparative adjectives, demonstrative pronouns; question forms (2011, p.22). There is no mention of any teaching approach for vocabulary and grammar, other than that children "learn incidentally through exposure to the spoken language" and there are "specific activities focused on language use" (2011, p.17). As the GPLMS lesson plans explicitly follow the CAPS curriculum (Botha, 2014), this undefined "mixed approach" continues into the GPLMS lesson plans. What the GPLMS lesson plans have done regarding Language Use is to follow 'the non-negotiable regime' provided by CAPS (Botha, 2014) by inserting grammatical structures into the weeks where they were allocated by the national curriculum.

In sum, South African teachers have to contend with the tensions within the mixed method in addition to the host of social and linguistic difficulties that form part of their teaching contexts.

Purpose and forms of Lesson Plans: teachers' versus learners' learning

Lesson plans (LPs) have different purposes, most commonly to ensure that teachers enact the national curriculum which establishes central control and regulates consistency and uniformity across the school system. LPs are often introduced to raise low standardised reading and literacy test scores that exist in many parts of the world (Reeves, 2010; Commeyras, 2007). LPs are also envisaged as curriculum resources which can possibly deepen teachers' subject matter knowledge, pedagogical content knowledge and knowledge of how student thinking develops (Davenport, 2009), in particular in disadvantaged communities with poorly qualified teachers (Beatty 2011, p.410). The literature distinguishes two approaches to the scripting of

teaching practice which reflect a different purpose emphasis: 'scripted instruction', known also as Direct Instruction (DI) (Bereiter & Englemann, 1966) and 'educative curriculum material' (ECM) (Davis and Krajcik, 2005; Morris & Hiebert, 2011; Hiebert & Morris, 2012).

Direct Instruction (DI) uses a top-down approach by scripting what teachers need to do and say. For English language and literacy teaching, the National Reading Panel (2 000) found that DI was used for phonics programs (p.107), to "remediate the decoding and phonemic awareness difficulties" (p.147) and also for reading (p.155) and spelling (p.161). In an open access course which teaches the principles of DI, Athabasca University describes the structure of DI as involving "a carefully designed sequence of items that are presented by the teacher one after the other" ('Open Module on Engelmann and Direct Instruction', n.d.).

DI is built on two premises. First, if 'technical problems' such as "ambiguous communication, the learner's lack of necessary background knowledge, or inadequate practice to master what is presented" can be controlled "the mind will learn [as] it is wired to do so" (Barbash, 2012, p.10). Second, teachers do not possess the expertise to teach well and they need curricula which are teacher-proof (Reeves, 2010, p.244). By building a logical sequence required for the concept at hand, precisely specifying the teachers' examples and prompts, and allowing for only one correct answer from the learners, DI intends to minimise learners' wrong inferences and/or conceptual ambiguity, making sure that the children will receive the rule of the concepts they need to learn. The prescribed style of instruction is brisk, with the teacher constantly monitoring student understanding (Kozioff *et al*., 2001 in Kim & Axelrod 2005, p.114) through teacher-directed prompts and modelling.

Educative Curriculum Materials (ECM) refers to curriculum materials (including textbooks) designed to develop the multiple knowledge bases needed to enact the curriculum. The conception of ECM intends to engage teachers in "the ideas underlying the writers' decisions and suggestions" (Remillard 2005, p.347). Most importantly, rather than merely guiding what the teachers need to do, ECMs aim to "speak to teachers about the ideas underlying the tasks" (Davis and Krajcik, 2005, p.5). Hiebert and Morris (2012) claim that developing annotated LPs (or SLPs) for teachers would reduce the problem many teachers experience of transferring formally acquired knowledge to classroom practice. They believe that, by following pre-annotated teaching routines, teachers would learn to see the routines in

the context of "the surrounding feature of the lesson" rather than as a technique in isolation, and eventually, by testing the routines in their own context teachers would learn to generalise: they "induce that the routine is a more general skill that might play a useful role in lessons not yet taught" (Hiebert and Morris, 2012, p.96). They envision a case-by-case lesson plan design process which culminates in instructional products – artefacts that are archived and available for public use and revision (2011, p.9). The success of developing ECMs would rely on knowledgeable and confident teachers who understand the concepts which underlie the routines and activities of annotated lessons, know how to experiment with lesson plans, and can advise on what needs to change as well as effect the actual changes to such plans.

This condensed review of debates about ESL teaching and different kinds of LPs will now contextualis e and inform our analysis of the GPLMS English (FAL) SLPs.

GPLMS English (FAL) SLPs

The space given to teachers' reliance on their professional judgement changed significantly from the first democratic era's curriculum framework (Curriculum, 2005) published in 1998 to the CAPS framework in 2012. C2005 did not provide specified curriculum content and teachers were told to design their own learning programmes as long as they met specified learner outcomes. The curriculum framework was then reworked twice, each time with more curriculum content specification. The current CAPS specifies content and assessment practices but not the tasks required for the 'how to' of teaching and enacting the curriculum. The GPLMS SLPs fill this gap.

The specific lesson topic under discussion is specified as 'language use and appears three times at different points of the English (FAL) Grade 3 syllabus. The content is taken from CAPS, with the GPLMS lesson plan providing the teaching activity. The outcome of "understanding 'countable' and 'uncountable' nouns" is formulated very broadly. The rationale for including this topic in the curriculum is not explained.[3] As a loose-standing item of knowledge, it has no ostensible purpose or significance, unless the teachers

[3] Interestingly, the topic is not presented to HL learners and usually not part of ESL programmes until much later.

choose to create this. The lesson plan demands very little of learners: they simply need to recognise that some things are 'countable' and others are not. Yet the 30 minutes prescribed time suggests to teachers that a substantial lesson needs to be devised.

ACTIVITY 2	***LANGUAGE USE***
TIME	30 minutes
OUTCOMES	**By the end of this activity, the learners will be able to :** • Understand and use countable and uncountable nouns
RESOURCES	• Pictures or objects: apples, oranges, pens, pencils, books, water, sugar, flour, sand, mealie meal
ACTIVITY DESCRIPTION	
	• Teacher settles the learners. They must have clear desks and face you. • Teacher tells the learners: I have 1 apple. I have 3 apples. Show them these apples. • Teacher follows the same procedure with oranges, pens, pencils, books. Teacher tells them that we can count the number of apples, oranges, pens, pencils and books that we have. • Teacher shows the learners the water. • Teacher asks them: can we count how much water we have. • Learners answer: no we can't. • Teacher follows the same procedure with sugar, sand, flour, mealie meal. • Teacher tells them that some things like apples we can count but things like sugar that is too much we can't count.
HOMEWORK	
• Reading sheets: Learners must practise reading these words aloud to someone at home or in their community. • Learn 10 words for spelling test on Friday.	

The naming of the activity ('language use') gives teachers licence to interpret it in either a grammar or a whole language approach. The activity of the SLP stipulates eight steps, which we refer to as a 'protocol of actions'. The protocol of actions adopts an ambiguous position regarding the approach to teaching this topic: under 'resources needed', it specifies objects from real life and suggests everyday contexts, yet the reference to the grammatical structure 'nouns' suggests that teaching a formal grammar concept is appropriate. The itemised presentation of the objects and how they are to be used to generate an understanding of the difference between countable and uncountable nouns falls more into a grammar approach, with the objects serving as a tool for enlivening the lesson and making it memorable, rather than creating a setting for communicative learning. There is no specific indication to help teachers establish whether they have achieved the outcome of the lesson, or that learners have understood.

The interpretation of the lesson is thus left to teachers, who are required to bring their own knowledge to decide on how to contextualise the SLP's content, which aspects of the topic to emphasise and how to teach it to their specific learners. Like DI, the protocol of actions in this lesson prescribes the language structure and examples plus the activities, but unlike DI, it provides no precise series of questions to ensure conceptual understanding. Like ECM, the protocol does not specify a complete script of teachers' talk, but unlike ECM, it offers no insight into the rationale underlying the protocol of actions. The lesson can be taught by using its content as a starting point for experiential learning in line with the whole language approach or by using a more formalistic approach that conceives of this lesson as focusing on a grammatical structure. These interpretations will be substantially influenced by teachers' knowledge. Teachers can frame the grammatical structure of 'countable' and 'uncountable' nouns by linking it to previous language use lessons or by relying on everyday knowledge as part of larger building blocks of knowledge and understanding. Since none of the 'language use' topics are accompanied by explanations, teachers are assumed to have this knowledge, be it from teacher education programmes, the CAPS curriculum or any other knowledge resource they have access to. For each subject and grade, the GPLMS SLPs assume teachers will engage with the content, introduce more content, link the concept of one lesson to the content of previous lessons, and adapt the teaching of the content to learners' needs.

Total teacher compliance is not envisaged. According to teacher interviews, HoDs and district officials only monitor learners' workbooks to establish whether the teachers correctly follow the curriculum pacing stipulated by the SLPs.

Analysis of the enactment of the LP on 'countable' and 'uncountable' nouns

Our empirical research compared how the GPLMS scripted lesson plan on 'countable' and 'uncountable' nouns was taught by two different teachers in similar schools. The following discussion highlights certain decisions the teachers made that involved professional judgement. To answer our research question of what knowledge the GPLMS SLPs make available for teachers and what teacher knowledge the SLPs assume for a full and orderly enactment, we investigate the following empirical questions:

1. How did the teachers follow the protocol of actions specified in the lesson plan, specifically focussing on the decisions they made when they enacted these actions?

2. What knowledge resources are contained in the SLP to assist the teachers in making these decisions?

Relevant information relating to the background of the school, the teacher and class is provided to convey a more comprehensive contextual picture.

Teacher 1: Palesa

Palesa works in a newly built township school which has overcrowded classrooms but well-maintained buildings. The school offers isiZulu as HL and English as FAL. Palesa has a senior primary teaching diploma and acted as a Sesotho coach for the GPLMS for a few years. Her class has 55 learners, making the class quite crowded. The walls are covered in posters and artwork and the blackboard has a large paper clock in the centre, some flash cards on the far left and a cloze exercise on the right. There is not a space in the class that is not overwhelmingly filled with objects and visuals. Her forceful teaching style captures the attention of the learners who are attentive throughout the lesson.

In the post-lesson interview, Palesa explained that every Thursday she starts thinking about the lesson plans for the following week. She reads the lesson plans, checking what resources she will need and, if a lesson seems difficult, she decides if she needs to "do more research on that particular lesson plan". Palesa emphasised that 'countable' and 'uncountable' nouns "[was] a difficult topic to deal with, especially for first additional language . . .". In order to help the learners, Palesa said she wanted "to simplify and try to come up with teaching aids, or aids that will help learners to realise, or to see the difference between being able to count something and being not able to count".

Palesa used elements of a second lesson, one that is scheduled for several weeks into the future. She decided to use articles (*a/an* and *the*) as a way to distinguish between 'countable' and 'uncountable' nouns. It is significant that this was her choice of 'aid' and it raises a number of important issues. First, this is indicative of a far more sophisticated[4] understanding of grammar than

---

[4] The use of articles as a tool for teaching 'countable' and 'uncountable' nouns is usually done at a relatively advanced stage of ESL training in most ESL programmes.

any of the three SLPs on this topic expect. In the later lesson on articles that she chose to incorporate, there is no explicit link to 'countable' and 'uncountable' nouns. From what Palesa said to the learners in the lesson and to us in the interview, it is clear that she intended to look at the two sets of grammatical structures relationally, that she thought both were difficult for the learners to grasp and both needed to be acquired independently and together. Second, using articles (*a/an* and *the*) to distinguish between 'countable' and 'uncountable' nouns suggests that Palesa is attempting to make the grammar meaningful by linking the concept of un/countable nouns to how they are used in sentences. She is going beyond simply following the protocol by tapping into what she understands to be the underlying rationale of the lesson plan. In this, she offers a general abstract rule, intended to spell out the relation between 'definite' and 'indefinite' articles and 'countable' and 'uncountable' nouns.

In the first ten minutes of the lesson, Palesa effectively offloaded the scripted lesson plan, following the protocol of actions to demonstrate, by means of real objects, that certain things can be counted as individual items (pencils, apples, oranges, books, etc.), and other cannot, because they are present as a mass (water, sugar, flour, milk, etc.). The aim of the lesson at its simplest level (that there are certain things that you can count easily and others not) seemed fairly clear to the learners. Had she stopped at this point, she would have covered the lesson plan as scripted. It is with Palesa's introduction of the 'aid' that the lesson disintegrated into confusion and inaccurate information. Palesa told the class that in English you use 'a' when referring to 'countable' nouns and 'the' when referring to 'uncountable' nouns. Her statement of the rule was accompanied by flashcards of the words 'a' and 'the'.[5] Palesa worked with her knowledge of the link between the two language structures in the belief that the link would create a contextual and communicative way of learning countable and uncountable nouns.

During the lesson, Palesa reinforced her partially incorrect rule by repeating it and by attempting to apply it to examples she or the learners brought for discussion. When a learner offered 'money' as a 'countable' noun that would use 'a', Palesa was visibly uncertain about whether to accept that example and

---

[5] The correct expression of the rule would have been that *both* 'a' and 'the' can be used for singular 'countable' nouns depending on desired meaning, that both plural 'countable' nouns and singular 'uncountable' nouns always take 'the', and that 'uncountable' nouns do not have a plural form and take neither article. This expression of the rule is clearly beyond the level of Grade 3 and Palesa wisely did not attempt it.

brushed it aside by asking: 'And another example?' The focus then moved on to the word 'the', with the admonition of how important and meaningful it is: "if used incorrectly, you will not make sense". Palesa said "We use the word 'the' for things that we cannot count" as she poured milk into a glass, and then she asked: "Can you tell me how much milk I have in this glass?" There was immediate confusion with some 'yes', and some 'no' answers. Palesa instantly changed the question to: "Can you count the milk in this glass?" The confusion abated. Palesa repeated the same process with water in a bottle: "Can you tell me how much water I have in this bottle?" Now the learners unanimously answered: 'No'.

Palesa then pointed to a self-made poster depicting several items (three pineapples, two bottles of juice, a bag of oranges, a bunch of bananas and a bottle of milk) and asked the learners to use the article 'a' or 'the' in front of the pictures. Learners wrote on the board: 'the' in front of the picture of pineapples; 'a' next to the picture of two bottles of juice. In the course of these examples Palesa praised the class ('you were really listening'), but at one point she realised the answers were incorrect within the framework she had created. Emphatically she repeated the 'rule': 'If you can count the item, you use 'a'; if you cannot count it, you use 'the'. She counted the pineapples with the class. 'There are three. So which word must come with the pineapples?' The class answered: 'the'. However, she 'corrected' the answers the learners had given, putting an 'a' in front of the three pineapples and 'the' in front of the two bottles of juice. Realising that there was a problem, she abruptly ended the lesson and said that she will revise the lesson with the class at another time.

Palesa's SLP modifications indicate that she was attempting to follow the 'mixed approach' by teaching the formal properties of language using a communicative classroom interaction. Clearly she did not feel restricted by the SLP: she treated it as a guide and combined it with own knowledge.

> *Um. . .I can say, I use the lesson plan just to direct me what to do on that particular day. And then mostly I use my own knowledge. So I use the lesson plan just to direct me, to say what part of the lesson I should teach for this week. Some of the examples that I use in my class are not from the lesson plan.*

Teacher 2: Sarah

Sarah works in a poor but well-maintained township school. From 2012, the school has been offering Setswana and Sesotho as HL and English as FAL. Sarah completed a BEd degree for secondary education in history and human movement science and teaches English as FAL to Grade 3 learners. The class has 45 learners.

Sarah, in her post-lesson interview, makes it very clear that she feels it is not only possible but, indeed, important and necessary to deviate from the LP:

> *. . .It's just a guideline. To me, it's just a guideline that this is what… This lesson plan, especially the English one, it actually frustrates me. Because I think we should be doing more than what the lesson plan dictates. It is so vague. For me, it's very vague*.

In her interview, she talked about the constraints of the SLP as well as the monitoring system which she feels prevents her from doing a great deal more than the SLP requires. She circumvents these constraints by concentrating on how to achieve the lesson outcomes and finding the methods that would accomplish what in her opinion would lead to more effective learning. In response to questions on how she decides on the improvisations and additions to the lesson she enacts, Sarah said she has an almost instinctive understanding of how to link topics so that there is a clear logical line in the lesson. She claims she does not do research but thinks about how to present the topic so it will coalesce with prior knowledge and common, everyday knowledge.

The way Sarah decided to structure the 'countable' and 'uncountable' lesson was through an initial focus on nouns, and then a move to singular and plural nouns. On an otherwise clean board, Sarah placed colour-coded flashcards. Facing the board, she placed yellow flashcards specifying *noun* and *naming word*; in the middle, she placed green flashcards specifying *countable nouns* and *can count*. On the right, she placed red flashcards specifying *uncountable nouns* and *cannot count*. This structure illustrates her attempt to provide a logical basis for the content: she wanted to teach her learners to think in categories and makes evident her decision to go beyond the SLP. She also used the pedagogical technique of colour coding, which she said in the interview creates excitement for learners and makes the categories memorable.

After a brief revision of what nouns are, not suggested by the lesson plan yet logically connected to the knowledge, Sarah proceeded to use realia (like oranges, pencils, books and fingers) to demonstrate the countability of these objects. She placed a number of flashcards under the applicable heading and wrote numbers in front of the words and an 's' after the words to show that these can be used in the plural. In her dealing with 'uncountable' nouns, Sarah asked the learners if they could think of an example of an 'uncountable' noun. This is a question which is not in the SLP. The answers from the learners included 'head', 'light', 'bread' and 'hair'. These answers suggest that exceptions and more abstract and idiomatic uses of English were readily within the command of these learners, despite them being beginner users of English. These answers from the learners created challenging situations for Sarah.

Sarah had to decide which of these answers were relevant or irrelevant, valid or invalid examples of the rule, and why, and secondly what the best way was to respond pedagogically. Her way of dealing with these unexpected responses was to tighten the frame. Sarah did not evaluate the examples against the categories of distinctions she offered on the board, instead she corrected them and closed discussion. She did so, for example, by pointing to the ceiling of the classroom and counting strips of neon tubes; by leading questions such as 'Can one say – one water, two waters, three waters?; by conclusive statements such as 'You cannot say: one sugar, two sugars, three sugars'; by putting her fingers into a cup of water to show learners that water cannot be counted. In her responses Sarah avoided complex and ambiguous examples from learners and ignored colloquial forms of expressions that override the general rule. She also did not clarify the confusion that arose from learners' recognition that 'uncountable' nouns were measurable through instruments (cups, spoons, braids, etc.). By teaching grammar through communicative questions and answers, and without offering explanations of the grammar, Sarah did not transmit the substance of the criteria she offered on the board.

Teacher knowledge matters for enactment of SLP

Palesa's lesson reveals how the SLP in its present structure invites teachers to expand and improvise. Palesa did not just offload the lesson as it stood, which she could have done and in a fraction of the allocated time. Instead, she chose to expose her learners to something more challenging, and which she knew

they would encounter in the future in modified form. The lack of explicit knowledge input in both of the lesson plans she used meant that Palesa relied on her own (partially incorrect) knowledge. Had she been clear on the rule and able to convey it adequately, it is possible that she could have enacted a strong and useful lesson for learners. Sarah's lesson demonstrated the intricate mosaic created by both planned and immediate professional judgements made during the lesson in response to unexpected answers. The lesson plan is interwoven in Sarah's enactment – she broadly followed its protocol of actions, but she was confronted with learners' suggestions of words which required her to draw on her knowledge expertise and judge which offering to accept and elaborate, which to ignore and which to redefine.

While the SLP specifies the protocol of actions to be followed, it does not provide ways in which the concept and different rules around 'countable' versus 'uncountable' nouns can be transmitted to learners, whether explicitly or implicitly and inductively. 'Countable' and 'uncountable' nouns is a difficult grammatical structure to teach. 'Uncountable' nouns, like water, sugar or flour, depict materials and substances as a mass, not as 'countable' individual items. These concrete substances are measurable, and teachers should be able to explain (for example) that it is not correct to say 'a water' or 'the waters', but it is correct to say 'a bottle of water' or 'the bottles of water'. Although both teachers spoke English well, they did not have a sufficient body of grammatical subject knowledge of English to deal with the complications that arose in their interactions with learners. And the SLP did not create a logical framework for how knowledge of this topic will assist learners in their use and understanding of English: it was not explicitly linked to any previous grammatically-based lessons and it made no reference to the way in which the content and concept are to be presented or framed for better learners' understanding. The GPLMS SLP thus relies on teachers having knowledge of English grammar in general, a clear understanding of the concept and rule attached to 'countable' and 'uncountable' nouns in particular and a sense of the communicative significance of the topic. It also assumes understanding of ESL principles of how this concept can be taught to Grade 3 second language learners, given the sophisticated nature of the concept and the need to keep the explanation simple and within the range of learners' familiarity with English.

Research on teacher knowledge maintains that teachers are specialists in what they know because they know it for the purpose of teaching it to others (Phelps and Schilling, 2004; Bertram, 2011). Elmore (in City, Elmore,

Fiarman & Teitel, 2009, p.29) asserts that strong teachers know "the ways in which to sequence, pace and assess the content they teach, the tasks which are appropriate for the content being taught, typical misunderstandings exhibited by learners of that content, and how to scaffold learners' learning up to the complexity of the task". Clearly, some of these aspects of teacher knowledge can be pre-specified for teachers through the curriculum and with more detail through SLPs, but knowing and working with learner misunderstandings and scaffolding the complexity of subject matter depends on teachers' knowledge. This is demonstrated unequivocally in the study on teacher knowledge and lesson enactment by Charalambous, Hill & Mitchell (2012). Subject and pedagogical knowledge precedes teaching routines specified by a lesson plan, and enables, or constrains, how a teacher follows the protocol of actions included in the routines. Unless they are following the tightly scripted DI programme, teachers must be able to analyse, alone or with colleagues, what a lesson plan focuses on, be able to accurately understand the knowledge that is embedded or assumed in the lesson plan and be able to make appropriate decisions regarding how to effectively teach the lesson and its concepts to their specific learners.

Christopher Winch, a philosopher of Education, wrote extensively on the differences and relations between 'organised propositional knowledge' (formally learned) and 'practical knowledge' (such as core methodologies or teaching routines specified by lesson plans or learned by experience). One of Winch's central claims in his work on *Dimensions Expertise* (2010, p.104) is that "the possession of relevant systematically organised knowledge is a prerequisite for action". Whilst the debate about which domains teacher knowledge consists of is important in showing that enacting a lesson plan takes place amidst a complexity of teacher knowledges (see Ball, Thames & Phelps, 2008; Gess-Newsome, 2015; Bertram, Christiansen and Mukeredzi, 2015), what is core to the contribution made by Winch on expertise is that the crux of professional practice lies in making professional judgements.

According to Winch (2010), each profession has a body of deductive and inductive knowledge, i.e. a systematically organised propositional knowledge that professionals follow when they make contextually specific judgements. Winch draws a crucial distinction between this systematically organised propositional knowledge and contingent or discrete propositional knowledge. He acknowledges that some professional decisions rely on a "well-established piece of contingent knowledge in a particular context", which means that these kinds of actions require very little deliberation and do not call for

professional judgement (2010, p.105), yet arguably, very few decisions in teaching fall into this category. What this suggests is that the possession of organised bodies of propositional knowledge is a necessary condition for action (e.g. for enacting a lesson plan) in teaching. Yes, teachers do benefit and should be exposed to a repertoire of techniques and procedures in the form of a protocol of actions, which they can try out and learn from over time, but without the propositional knowledge behind the protocol, teachers are unlikely to know for what reasons one form of action or response is better than another.

A systematically organised propositional knowledge provides the ordering principles for the practical wisdom of teaching (Shalem and Slonimsky, 2013). Put differently, teachers' practical knowledge relies on *what* they know as specialists in teaching a specific subject and topic prescribed in the curriculum. What they know as specialists about 'countable' and 'uncountable' nouns begins with the grammatical rules about 'countable' and 'uncountable' nouns and its related concepts. Then it extends to the purpose of the curriculum they teach, its overall structure, sequence and pacing, why this topic is included in the Grade 3 curriculum, which of the rules need to be transmitted to Grade 3 learners, and what common mistakes and misconceptions related to the topic they should expect. What teachers need to know as specialists also includes knowledge about the different approaches to teaching English as FAL: specifically which of the formal properties of a topic to make explicit and how; when to embed the learning process in an everyday knowledge and when to foreground the language structure embodied in textual meanings covered by the curriculum; when to follow the lesson plan and when it is more appropriate to change to a different routine because that offers a better angle on the topic. All of this propositional knowledge, which is not in the SLPs, guides teachers when they need to judge the nature of a learner's response (its clarity and accuracy or how close or far a response is from the general rule or concept underlying the topic under discussion) or when they mediate errors which learners make and decide on how best to respond to those (what to say and when to ignore).

Conclusion

The idea of scripting new teaching routines is understandable in the light of general agreement that many professional development programmes in South Africa have failed to make a difference to teachers' practice and learners' performance (De Clercq and Shalem, 2014). An important premise underlying

the use of SLPs is that, by following SLPs and executing the specified teaching routines over a period of time, teachers will experience a new way of teaching, develop new insights into what and how they are teaching and acquire well-structured practices to replace their weak practices.

Our answer to our research question is that the value of the GPLMS SLPs, given their skeleton form, lies ironically with the knowledge the teacher brings to enact the plan. Teachers whose organised propositional knowledge is weak will struggle to frame and re-contextualise the protocol of actions in the lesson plans. For these teachers, the conceptual relations between ideas are weak and so are the relations between general ideas and the occurrences which arise in practice, which are hard to predict, but which need to be managed in an educationally sound way.

The knowledge resources offered by the GPLMS SLPs are a protocol of actions, i.e. aspects of practical knowledge, which are assumed to sufficiently guide teachers on 'what and how to teach'. This paper argues that following the protocol of actions *well*, relies on knowing what to teach, recognising distinctions between ways of explaining and representing specific content, and knowing how to apply subject matter knowledge to learners of a specific age and cognitive level of development. Being professionals, teachers need to combine their organised propositional knowledge of subject matter with educational considerations such as context, types of knowledge, learning misconceptions, styles of pedagogy, and assessment so as to enact the lesson plans effectively

By foregrounding the role of teacher knowledge, we do not deny the general value of SLPs. We do, however, foreground the interrelation between teacher knowledge and the quality of their enactment of SLPs. Our conclusion is that it is essential to understand which aspects of teacher knowledge can be provided by SLPs and be acquired through experiencing teaching routines, and which aspects cannot be provided because experience of teaching routines is not sufficient for acquiring that knowledge. SLPs can provide the knowledge of sequence and pacing of the content to be taught as well as sample routines appropriate for the topic, but they cannot help teachers to know the topic (knowledge of subject matter) and what matters in the topic, nor how to respond to learners who take them beyond the protocol, unless they are vastly expanded. The intentions of completely scripted lesson plans precisely designed to clarify concepts, as in DI, as well as ECM type lesson plans that make explicit the underlying knowledge of the lesson could both

open new possibilities for the redesign of the GPLMS SLP, yet would raise new and important questions beyond the scope of this article.

References

Ball, D., Thames, M., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, *59*(5), 389–407.

Barbash, S. (2012). *Clear teaching: With direct instruction, Siegfried Engelmann discovered a better way of teaching* (1st edition). Arlington, VA: Education Consumers Foundation.

Beatty, B. (2011). The dilemma of scripted instruction: Comparing teacher autonomy, fidelity, and resistance in the Froebelian Kindergarten, Montessori, Direct Instruction, and Success for All. *Teachers College Record*, *113*(3), 395–430.

Bereiter, C., & Englemann, C. (1966). *Teaching disadvantaged children in the preschool*. Prentice-Hall.

Bertram, C. (2011). What does research say about teacher learning and teacher knowledge? Implications for professional development in South Africa. *Journal of Education*, *52*(5), 26.

Bertram, C., Christiansen, I. M., & Mukeredzi, T. (2015). *Exploring the complexities of describing Foundation Phase teachers' professional knowledge base*. Mimeo.

Botha, D. (2014). A rationale for detailed lesson plans – The GPLMS lesson plans in context. Presented at the SAERA conference, Durban, South Africa.

Cilliers, J., Fleisch, B., Prinsloo, C., Taylor, S., & Van der Berg, S. (2016). *Scripted lesson plans and teaching to the level of the child: A randomized evaluation two interventions aimed at improving early-grade reading in South Africa.* (Memo).

City, E. A., Elmore, R., Fiarman, S., & Teitel, L. (Eds.). (2009) *Instructional rounds in education: a network approach to improving teaching and learning*. Cambridge, Mass: Harvard Education Press.

Charalambous C. Y., Hill, H.C., & Mitchell R.N. (2012). Two negatives don't always make a positive: Exploring how limitations in teacher knowledge and the curriculum contribute to instructional quality, *Journal of Curriculum Studies*, *44*(4), 489–513.

Clark, U. (2005). Bernstein's theory of pedagogic discourse: Linguistics, educational policy and practice in the UK English/literacy classroom. *English Teaching: Practice and Critique*, *4*(3), 32–47.

Commeyras, M. (2007). Scripted Reading Instruction? What's a teacher educator to do? *Phi Delta Kappan*, *88*(5), 404–407.

Cummins, J. (1977). Pedagogies for the poor? Realigning reading instruction for low-income students with scientifically based reading. *Educational Researcher*, *36*(9), 564–572.

Davenport, L. (2009). What does it take to learn from and through curriculum materials? In J. Remillard, B. A. Herbel-Eisenmann, & G. M. Lloyd (Eds.), *Mathematics teachers at work: connecting curriculum materials and classroom instruction*. New York?; London: Routledge.

Davis, E. A., & Krajcik, J. S. (2005). Designing Educative Curriculum Materials to promote teacher learning. *Educational Researcher*, *34*(3), 3–14.

De Clercq, F. (2014). Improving teachers' practice in poorly performing primary schools: The trial of the GPLMS intervention in Gauteng. *Education as Change*, *18*(2), 303–318. http://doi.org/10.1080/16823206.2014.919234

De Clercq, F., & Shalem, Y. (2014). Teacher knowledge and employer-driven professional development: a critical analysis of the Gauteng Department of Education programmes. *Southern African Review of Education with Education with Production*, *20*(1), 129–147.

Department of Basic Education (2011). Curriculum and Assessment Policy Statement (CAPS), Grades R–3: English First Additional Language. Pretoria.

Department of Education. (2008). *Teaching reading in the early grades: a teacher's handbook*. Pretoria: DoE.

Fleisch, B., & Schöer, V. (2014). Large-scale instructional reform in the Global South: insights from the mid-point evaluation of the Gauteng Primary Language and Mathematics Strategy. *South African Journal of Education*, *34*(3), 01–12.

Gauteng Department of Education. (2010). *Gauteng Primary Literacy Strategy 2010–2014*. Johannesburg: GDE.

Gess-Newsome, J. (2015). A model of teacher professional knowledge and skill including PCK: Results of the thinking from the PCK summit. In A. Berry, P. J. Friedrichsen, & J. Loughran (Eds), *Re-examining pedagogical content knowledge in science education*. New York: Routledge.

Heugh, K. (2013). Where "whole language" literacy and communicative language teaching fail. *HSRC Review*, *11*(1), 14–15.

Hiebert, J., & Morris, A. K. (2012). Teaching, rather than teachers, as a path toward improving classroom instruction. *Journal of Teacher Education*, *63*(2), 92–102. http://doi.org/10.1177/0022487111428328

Hoadley, U. (2012). What do we know about teaching and learning in South African primary schools? *Education as Change*, *16*(2), 187–202. http://doi.org/10.1080/16823206.2012.745725

Kim, T., & Axelrod, S. (2005). Direct instruction: An educators' guide and a plea for action. *Behavior Analyst Today*, *6*(2), 111–120.

Masterson, L. (2013). A case study of Foundation Phase teachers' experiences of literacy coaching in the GPLMS programme. Unpublished MA research report, University of the Witwatersrand, Johannesburg.

Morris, A. K., & Hiebert, J. (2011). Creating shared instructional products: An alternative approach to improving teaching. *Educational Researcher*, *40*(1), 5–14. http://doi.org/10.3102/0013189X10393501

National Reading Panel – Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction – report.pdf. (2000). Retrieved from: https://www.nichd.nih.gov/publications/pubs/nrp/documents/report.pdf

NEEDU. (2013). *National Report 2012: The state of literacy teaching and learning in the Foundation Phase*. Pretoria: Department of Basic Education.

Open Module on Engelmann and Direct Instruction. (n.d.). Retrieved from https:fhss2.athabascau.ca/html/387/OpenModules/Engelmann/etpractice.html

Pearson, P. D. (2004). The reading wars. *Educational Policy*, *18*(1), 216–252. http://doi.org/10.1177/0895904803260041

Phelps, G., & Schilling, S. (2004). Developing measures of content knowledge for teaching reading. *The Elementary School Journal*, *105*(1), 31–48. http://doi.org/10.1086/428764

Reeves, J. (2010). Teacher learning by script. *Language Teaching Research*, *14*(3), 241–258. http://doi.org/10.1177/1362168810365252

Reeves, C., Heugh, K., Prinsloo, C. H., MacDonald, C., Netshitangani, T., Alidou, H., Diedericks, G., and Herbst, D. (2008). *Evaluation of literacy teaching in primary schools of Limpopo Province.* Pretoria: HSRC. Retrieved from http://www.hsrc.ac.za/en/research-outputs/view/4257

Remillard, J. T. (2005). Examining key concepts in research on teachers' use of mathematics curricula. *Review of Educational Research*, *75*(2), 211–246. http://doi.org/10.3102/00346543075002211

Shalem, Y., & Slonimsky, L. (2013). Practical knowledge of teaching practice – what counts? *Journal of Education*, *58*, 67–86.

Stahl, S. (2001). Teaching phonics and phonological awareness. In S. Neuman & D. Dickinson (Eds.), *Handbook of Early Literacy Research, Vol.1* (Vol. 1). NY – London: Guildford Press.

Taylor, N., & Taylor, S. (2013). Teacher knowledge and professional habitus. In N. Taylor, S. Van Den Berg, & T. Mabogoane (Eds.), *Creating effective schools*. Cape Town: Pearson.

Widodo, H. P. (2006). Approaches and procedures for teaching grammar. *English Teaching: Practice and Critique*, *5*(1), 122–141.

Winch, C. (2010). *Dimensions of expertise.* London: Continuum.

Yael Shalem
Carola Steinberg
Hannchen Koornhof
Francine de Clercq
School of Education
University of the Witwatersrand

yael.shalem@wits.ac.za
carola.steinberg@wits.ac.za
hannchen.koornhof@wits.ac.za
francine.declercq@wits.ac.za