The Relationship between Metalinguistic Understanding, Student Writing and Teaching

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Abstract

Explicit grammatical knowledge is often referred to as metalinguistic knowledge, which can be brought into conscious awareness and verbalised. Theoretical studies distinguish between explicit and implicit; declarative and procedural knowledge (Gombert, 1992); and between the ability to analyse language and to control it (Bialystok, 1994), and conceive of these as significant in metalinguistic development. Yet, little is known about how school-aged learners develop metalinguistic understanding, and what facilitates transfer into "enabling tools" for writing (Myhill, 2005, p.89). This paper presents findings from a nationally-funded longitudinal study, conducted in two primary schools and two secondary schools in South West England over three years, investigating development in metalinguistic understanding and its relationship to development in writing, and the influence of teaching. A broad set of qualitative data was collected: observations of writing lessons; writing samples, and writing conversations with focus students in each class. These probed students' ability to talk explicitly about language choices, including the use of grammatical metalanguage, and their "applied" understanding of how grammar constructions can create particular effects. Data analysis illustrates:

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· how some students can explicitly articulate choices about their writing following explicit teaching of a grammar point;
· how some students are able to use grammatical structures in their writing but struggle to articulate understanding;
· how a teacher's pedagogical actions are significant in developing or constraining students' metalinguistic knowledge of writing.

The study signals the significance of appropriate metalinguistic pedagogical interventions in developing students' metalinguistic understanding of writing and provides important insights into the relationship between declarative and procedural knowledge.

Keywords: metalinguistic understanding, explicit language teaching, writing development

Resumen

El conocimiento gramatical explícito se denomina a menudo *conocimiento metalingüístico* que puede ser llevado a la conciencia consciente y verbalizado. Los estudios teóricos distinguen entre el conocimiento metalingüístico explícito y el implícito; entre el conocimiento declarativo y el procesal (Gombert, 1992); y entre la capacidad de analizar el lenguaje y controlarlo (Bialystok, 1994), y concebirlas como importantes en el desarrollo metalingüístico. Sin embargo, poco se sabe acerca de cómo los estudiantes en edad escolar desarrollan la comprensión metalingüística y lo que facilita su transferencia a las "herramientas habilitadoras" para escribir (Myhill, 2005, p. 89). Este artículo presenta los resultados de un estudio longitudinal financiado a nivel nacional, realizado en dos escuelas primarias y dos escuelas secundarias en el Sudoeste de Inglaterra durante tres años, investigando el desarrollo de la comprensión metalingüística y su relación con el desarrollo de la escritura y la influencia de la enseñanza. Se recogió un amplio conjunto de datos cualitativos: observaciones de lecciones de escritura; muestras de textos escritos y transcripciones de conversaciones con estudiantes escogidos en cada clase. Se exploraron la habilidad de estos estudiantes para hablar de las opciones de lenguaje, incluyendo el uso del metalenguaje gramatical, y su comprensión "aplicada" de cómo las construcciones gramaticales pueden crear efectos particulares. El análisis de datos ilustra:

· cómo algunos estudiantes pueden articular explícitamente las opciones sobre su escritura después de la enseñanza explícita de un punto de gramática;
· cómo algunos estudiantes son capaces de usar estructuras gramaticales en su escritura, pero encuentran difícil articular la comprensión;
· cómo las acciones pedagógicas de un profesor son significativas en el desarrollo o limitación de la comprensión metalingüística de los estudiantes sobre la escritura.

El estudio señala la importancia de las intervenciones pedagógicas metalingüísticas apropiadas en el desarrollo de la comprensión metalingüística de los estudiantes de la escritura y proporciona información sobre la relación entre el conocimiento declarativo y el procesal.

Palabras clave: comprensión metalingüística, enseñanza explícita de idiomas, desarrollo de la escritura

Introduction

In the context of raising standards of literacy, recent changes to first language English curricula in a number of Anglophone jurisdictions have placed an increased emphasis on the explicit teaching of grammatical knowledge in school classrooms. The nature of the knowledge demanded by the new curricula extends beyond "regimes of correctness" and "pedagogic preoccupations with grammatical form" (Macken-Horarik, 2016 p. 4) to encompass an understanding of how language functions as a flexible, meaning-making tool. In the United States, the discrete Language strand of the Common Core State Standards focuses on grammatical accuracy, "the essential 'rules' of standard written and spoken English", but also stresses communicative contexts and purposes, approaching language as "a matter of craft and informed choices among alternatives" (CCSI-ELA, 2012 p. 8). The Australian Curriculum for English is more overtly concerned with developing students' understanding of the creative and social functions of language, providing "a coherent, dynamic, and evolving body of knowledge about the English language and how it works" (ACARA, 2009 p. 10) from foundation through to senior secondary years. In the UK, the current National Curriculum for English suggests a rhetorical role for grammatical knowledge in developing "more conscious control and choice in our language" (Department for Education, 2013) but is also highly prescriptive about the grammatical content and accompanying

terminology that students should master, with a statutory test of grammar knowledge at age 11. Despite their different emphases, these curricula assume the importance of metalinguistic knowledge for the development of writing, yet there has been limited research into how students might transform grammatical understanding into "enabling tools for writing" (Myhill, 2005 p. 89) or "rhetorical know-how" (Macken-Horarik, Love & Unsworth, 2011 p. 11). This paper aims to extend current knowledge on the nature of metalinguistic understanding about writing, in the context of later primary and early secondary school classrooms, offering insights into the complex relationship between metalinguistic understanding, student writing and teaching.

Conceptual framework

Of central concern to this investigation are the questions of what counts as metalinguistic understanding in writing and how this can be identified. The term itself is problematic; Camps and Milian (1999) and Myhill and Jones (2015) point out that "metalinguistic" is an adjective requiring a noun for completion, leading to a number of closely-related terms, such as "metalinguistic awareness", "metalinguistic knowledge" or "metalinguistic activity" with subsequent conceptual fuzziness. Functionally-orientated understandings of grammar inform the research reported in this paper (see for example Halliday, 1993; Micciche, 2004; Derewianka & Jones, 2010; Kolln & Gray, 2006) which seek to make connections for learners between grammatical choices and meaning-making in their own writing, helping them shape and craft text to satisfy rhetorical intentions. Such control requires an ability to objectively observe and discuss language (Camps & Milian, 1999, p. 6). Thus, the full definition of metalinguistic understanding adopted by the research team is: "the explicit bringing into consciousness of an attention to language as an artifact, and the conscious monitoring and manipulation of language to create desired meanings grounded in socially shared understandings" (Myhill *et al.*, 2012, p. 250).

Metalinguistic understanding and writing

Central to this definition of metalinguistic understanding is the emphasis on explicit, conscious decision-making in acts of writing, the ability to think grammatically and to reflect on the effectiveness of language choices. However, we know very little about how this ability develops. Existing models of language development largely apply to speech or second-language learning,

offering binary distinctions that may not relate adequately to older learner writers. These include a difference between tacit and explicit knowledge —the knowledge we possess but cannot articulate, as opposed to the knowledge we can verbalise and explain (Polyani, 1966), or between declarative and procedural knowledge— the knowledge we have of rules and conventions and our ability to put this knowledge into action (Gombert, 1992, p. 191). In similar vein, Bialystok (1994) distinguishes between analysis —the ability to represent conscious knowledge about language— and control, the ability to selectively and purposefully apply that knowledge. It is also unclear if metalinguistic understanding develops in a linear direction: Gombert suggests that implicit, unconscious knowledge precedes explicit understanding, and declarative knowledge precedes metalinguistic control, on the basis that we cannot use the knowledge that we do not have. Bialystok (2001 p.133) posits that "increases in control occur in response to increases in analysis" (my italics). However, in writing, it may well be that students can make metalinguistic choices without being able to name the structures they are using, or that processes have become so automated that students can no longer consciously reflect on them. Metalinguistic knowledge might also be generated as a direct result of classroom instruction and activity, the student consciously manipulating a new grammatical structure until its use becomes automated and unconscious.

The role of grammatical metalanguage in writing development is also open to question. Explicit grammatical knowledge is often referred to as metalinguistic knowledge which can be brought into conscious awareness and verbalised; thus, the student's talk about the text is the main way of making metalinguistic understanding visible. In the writing classroom, the metalinguistic discussion is often supported by and framed within the use of grammatical terminology. Indeed, in the current national curriculum in England students' use of specified terms when discussing written texts is a statutory requirement (Department for Education, 2013). For example, at age 9, "terminology for pupils" includes determiner, possessive pronoun and adverbial, while in the compulsory national assessment test at age 11, students will encounter terms such as subject, object, fronted adverbial, present progressive and past progressive within the test rubric. Many teachers will be aware that the use of linguistic terminology does not automatically equate with understanding. For example, a child in our research said of his argument writing, "I'm pleased I've used fronted adverbials" which featured on a class list of success criteria but was unable to link to a purpose or effect for the

reader. Another child in the same class said of her argument, "It flows well" and noted how this was helped by her use of "Firstly" and "Furthermore", but did not recognise the term *fronted adverbial.* A functional, rhetorical view of metalinguistic understanding in writing suggests the need for a broader metalanguage that will describe language used "with grammar in mind" (Halliday, 2003); a "rhetorical grammatics" that will help turn knowledge about language into "know-how" (Macken-Horarik *et al.*, 2011, p. 11). This emphasis on making rhetorical goals visible through talk is of particular relevance to the research reported in this paper.

Metalinguistic understanding and the teaching of writing

Jones and Chen (2012, p. 148) suggest that the shift from the traditional prescriptive and decontextualized approach to one which privileges the rhetorical power of grammar "makes substantial demands on teachers in terms of their subject matter knowledge and pedagogic knowledge", a view echoed by Myhill (2005) and Williams (2005). Macken-Horarik *et al.* (2011) delineate the skills that will enable students to draw on metalinguistic understanding in writing: communicating knowledge about language; applying this knowledge to composition, and considering how this knowledge builds and develops. Yet, teachers' lack of certain linguistic subject knowledge is documented in all the jurisdictions mentioned in this paper. A UK study by Harper and Rennie (2009) found that beginning teachers had only a fragmented knowledge about language. Many of them had received no formal grammar instruction in their own schooling, but this was a problem shared with experienced teachers, many of whom lacked "an adequate grounding in the linguistics of English" (Hudson & Walmsley, 2005, p. 613) or struggled to apply linguistic knowledge to the teaching of writing. In a large-scale randomised controlled trial investigating the impact of contextualised grammar teaching on twelve-year-old children's writing, Myhill *et al.* (2012) found a measurable relationship between teacher linguistic subject knowledge and improvement in student writing.

The research reported here focuses on one particular classroom rhetorical goal that emerged strongly from the data —the goal of improving writing by making it more detailed and descriptive. This goal was prominent in teachers' planning, in observed lessons and in interviews with students aged between 9 and 14, where they discussed language choices in a range of writing tasks. Cross-referencing between sources of data has enabled exploration of students' metalinguistic understanding (specifically, how to achieve detailed

description), as evidenced through talk and in writing, and its relationship to the teaching they received.

Methodology

The data for this paper are drawn from an ESRC-funded study addressing the research question: what is the relationship between metalinguistic knowledge and understanding, and development in writing? The research design was an in-depth longitudinal cross-phase qualitative study, comprising the tracking of 2 primary classes (age 9-11: n=57) and 2 secondary classes (age 12-14: n=52) in four different comprehensive schools, over three years. Each Autumn and Spring term of the study, the three researchers co-planned writing lessons with participating teachers which embedded explicit grammar teaching in writing contexts appropriate to the curriculum in each school, followed by visits to observe these lessons, which were audio and video recorded, and to collect samples of writing resulting from them. In all, 112 lessons were observed (51 primaries; 61 secondary), and 179 samples of writing were collected (92 primaries; 87 secondary). From each class, 9 students (balanced by gender and ability) were selected by their teacher. Interviews in the form of "writing conversations" developed for the study were conducted with these focus students twice a year, on completion of the observed teaching units, probing metalinguistic understanding through short grammatical labelling exercises and through more extended talk about their own and peers' writing, focused on writing intentions and the impact of language choices. In total, there were 187 writing conversations, 91 primaries and 96 secondaries. Data analysis included: a linguistic analysis of 100-word samples of writing; inductive analysis of writing conversations using Nvivo, and the compilation of all data sources for the focus students to provide detailed case studies. Reported findings are drawn from these two sources. One thematic cluster used the *a priori* code "Metalinguistic Grammar Understanding" to capture students' understanding of grammar terms and concepts. Emergent thematic coding led to clusters titled Grammar-Writing Relationship; Handling the Reader-Writer Relationship; Metacognition; Grammatical Reasoning and Pedagogic Practices. Table 1 provides detail of the sub-codes within four themes that were a particularly rich source of comment about the rhetorical goal of writing descriptive detail.

Table 1. Examples of coding within themes

Theme	Sub-code	Definition	Example
Grammar-Writing Relationship	Improving Writing	Students' suggestions for improving their writing, including comments relating to their view of good writing.	I'd probably add some more description to this bit here… 'cos that was the very start of my story and it was like bang it's already into it. (Y6)
Handling the Reader-Writer Relationship	Awareness of Readers' Needs	Comments which suggest that the student has anticipated the reader's response and/or made writing decisions with the reader in mind.	I've put in lots of detail and described it, otherwise, readers can get really bored and kind of stop reading. (Y7)
Grammatical Reasoning	Amount of detail or description	Reasoning about sentence types based on length created by additional detail or description.	It might be kind of complex because it's more descriptive. (Y9)
Pedagogic Practices	Implementing learning	Comments relating to intended or actual use in the writing of what students have been taught about a language feature.	He wanted us to kind of like put lots of description and use lots of good words like adverbs and stuff like that. (Y6)

Source: own work

In a longitudinal qualitative study such as this there are many difficulties of interpretation and several possible variables to take into account when drawing out findings. As an illustration, consider the writing of one of the focus students, Anna, aged 11 (who has invented an episode for a Harry Potter story) and her ensuing comments:

Snape barged into the room as he pushed the doors open. Behind were 50 bats waiting to follow. Harry sighed, "Oh not Snape again." Snape was clearly in another foul mood as he marched to front of the room. The wind blew the window open and flicked the old curtain to the side.

I could improve my description to really like tell people how it's happening and stuff because I struggle a bit with that. I know how to put it but then I don't know how to…erm…I know what it is but I just don't know how to put it into my writing.

There is evidence in Anna's writing of the grammatical features that were a focus of explicit teaching: prepositional phrases that precisely describe narrative setting; lexical reporting verbs that reveal character through implication rather than direct statement (referred to in many primary classrooms as "show not tell"); accurate punctuation of sentence boundaries and direct speech. Anna does not refer to this teaching, beyond a possible allusion to "show not tell" technique ("to really like tell people") which suggests she has misunderstood its rhetorical purpose. Her goal for improving writing is generalised and unhelpful, since she has already achieved effective description, and her reflection leaves a possibly important insight ambiguous: is she saying that she knows how to write descriptively but can't explain what she's done, or that she understands the features of descriptive writing but not how to use them? Students' capacity to verbalise grammar knowledge and explain rhetorical goals was one important variable in this study and was influenced by a range of factors beyond their ability as writers or speakers. For example, in the final year of the study, the influence of national testing in primary schools was evident in observed lessons and in writing conversations, with a higher number of uses of grammatical terminology by students and an increase in references to implement learning: grammar talk was more prominent as national tests drew closer.

Note that in presenting findings, student comments have been attributed by year group. In England, age/year group equivalences are as follows: Primary phase: Y4 (age 9); Y5 (age 10); Y6 (age 11); Secondary phase: Y7 (age 12); Y8 (age 13); Y9 (age 14).

Findings

Findings are focused on the question of how children's metalinguistic understanding of one rhetorical goal —writing descriptively— develops in relation to what teachers teach them, and how it plays out in their writing, Metalinguistic understanding is framed as "any grammatically-informed knowledge about language" (Macken-Horarik *et al.*, 2011, p. 11). Three main aspects are considered: the nature of students' grammatically-informed understanding of writing descriptive detail; how that understanding develops, and the impact of teaching.

Writing descriptively: students' metalinguistic understanding

Writing conversation analysis made clear that providing detailed description is a common classroom goal: the terms "describing", "description" and "detail" all featured within the 120 most frequently used words, while there were 389 exact references to "descriptive detail", found in 108 sources. Lesson objectives in all year groups featured the terms, applied to a range of genres, with various degrees of specificity (see Table 2 below).

Table 2. Examples of writing lesson objectives

Year	Objective	Writing context
4	Describe the life of a character	Non-chronological report about Pompeii
4	Use relative clauses to add detail	Information text on an animal habitat
5	Be descriptive	Describing an invented dragon
8	Use expanded noun phrases for descriptive detail	Fictional narrative authentic to the First World War

Source: own work

Students in all year groups drew on the idea of writing descriptively to explain their authorial intention:

· I was trying to get as much description and as much detail in there so that that person knows what to do (Y5 instructional writing).
· "The golden sun shines on the misty rock" —I want the reader to picture in their head what's happening (Y6 narrative writing).
· It's describing first person so it feels like the reader is the one that's suffering so then they feel the pain… I wanted the reader to feel like it was happening (Y8 writing war poems).

The idea that quality in writing is related to the amount of detail and description it contains featured prominently in students' reflections on their writing and suggestions for improving it, across the age and ability range, as here:

· I just think about getting more detail in there (Y4 average writer).
· you can give a load of detail about what's actually happening… you can hook them in with like the long sentences (Y8 weak writer).

With a strong generalised view emerging that good writing "just goes into more descriptions" and can be improved by "adding in different things". An able writer in Y9 clearly recognised this as a common classroom rhetorical goal when she commented, "I know you're supposed to say that writing should go into lots of detail".

However, the data clearly signalled students' difficulty in moving from generalisations to specifics. Even when the learning objective had been grammatically precise, there were very few comments that tied the creation of descriptive detail to a specific feature of the language, with consequent vagueness about how that detail had been provided. Younger students and weaker older writers often focused solely on the content of their writing and prompts to discuss language were not taken up. One Y8 student clearly understood the aim of using description authentic to trench warfare, explaining her research into the use of gun dogs and courts martial, details she effectively wove into her narrative. However, when prompted to talk about how she had created the description in, "I could barely breathe in the damp humid air", she responded with a literal description of content: "I tried to make it sound like how I pictured it, like foggy and murky, kind of hard to breathe because it feels really damp and breathless". Only the two most able writers in this class referred to the use of noun phrases that had been the focus of teaching, and which were listed and exemplified on students' planning sheet for the task.

Suggestions for improving writing that were driven by the goal of including descriptive detail were often generalised to the point of being meaningless:

·   I need to make my writing more descriptive. How are you going to do that? By using more descriptive words (Y7).
·   I've put in lots of description but I've only put it in where it needs it (Y5).

In suggesting further improvements, this same student said: "I think I'd add a bit more description"; the "default" rhetorical goal both led to contradictory statements and constrained students' judgements, illustrated in Table 3 below:

Table 3. Examples of comments on improving writing

Student	Context	Comment
Y5 weak writer	Successful use of one-clause sentence marking a stage in the life cycle of a butterfly: "In summer the eggs hatch".	"I need more, that's only 3 or 4 words".
Y6 able writer	Contrasting narrative openings in Y4 ("Once in a peaceful park…") and Y6 ("One day I was playing in the park…").	"I was better in Year 4… I describe more about the park".

Source: own work

In instances like these, an emphasis on description dominated the student's repertoire of choices to the extent that other successful features of writing were missed.

The concept of descriptive detail also dominated students' metalinguistic understanding at word and syntax level. It was used to define word classes, with consequent confusion:

· An adverb is just more description before the verb (Y5).
· A verb, isn't that describing? A verb describes an object (Y7).
· I'm not quite sure between a verb or an adjective because they're both words to describe something (Y8).

Explanations that were allied with the goal of "adding more" led to grammatical guesswork:

· Put more pronouns in; they make it more descriptive (Y4).

And suspect reasoning:

· Adjectives make more detail…there's quite a lot of adjectives; put some more verbs instead of adjectives…it will describe it more (Y4).

Recognition of sentence types was often reliant on semantic understanding, driven by the notion of adding detail for description, for example:

· Simple sentence doesn't have a really like descriptive (Y5).
· A clause is when you drop something into the sentence to add more detail (Y5).

· What makes that a complex sentence? Like just adding more detail in it I guess… (Y9).

Indeed, the three most frequently occurring references within the theme "Grammatical Reasoning" were coded as "amount of detail or description" (63 references); "comma confusion" (39 references) and "semantic explanations" (33 references). These three were interlinked: students who gave non-grammatical explanations of syntax often thought that the function of a clause or a comma was to add more detail. None of these references located a verb as being at the heart of a clause. The data strongly suggest that the goal of "adding descriptive detail" is rarely understood grammatically and may even perpetuate grammatical misunderstanding.

Writing descriptively: development of understanding

The example of Anna, provided earlier, illustrates that there can be a gap between students' articulated metalinguistic understanding and its application in writing, making it difficult to track development. Case study data provided insight into the complexities. In Y4, Joel, an average ability writer, reflects on his description of everyday life in Pompeii:

In the beautiful city of Pompeii the sun glimmered in the bay of Naples. "I've put loads of interesting detail". He singles out "glimmered", "because it shows where the sun's shining through". He has self-assessed use of "powerful adjectives and descriptive phrases" but comments, "I don't know if I've got an adjective", adding, "an adverb describes a verb, but I didn't use any verbs…'glimmered in the bay of Naples', that's a phrase". He later defines "noun" as "a little bit of a sentence that describes more about; I had one written down here which is 'glimmered in the bay of Naples', that's one noun".

Joel has broadly understood rhetorical purpose, "interesting detail" echoing semantic teacher talk, but despite his prominent use of grammatical terminology, he shows very little understanding of word class function and only a partial grasp of the noun phrase teaching focus, seemingly alluded to in his definition of noun as "a little bit of a sentence that describes more

about". There is no convincing evidence that his grammatical knowledge is secure enough to enable "conscious control and choice over language" (Carter, 1990, p. 119).

In Y6, Joel reflects on the ending to his mythical story about a rain forest creature:

> Late one night, in a tree of soft mosses high in the canopy where the sky was black with little twinkles of light sparkling high in the sky, the child took the great Glass Frog's hand in hers. The Glass Frog touched her face and sang his final spirit song. As he felt her cold face, child became frog, spirit frog. "I was trying to describe what the place was like, by putting in 'soft mosses' and what it is, where it is… 'little twinkles of light' makes them think that it's night… It's making me think that he's getting older because he's in a tree of soft mosses when he gently put his hand in hers". Anything about the way you've structured the sentence that you think is good? "I've left the end at the end… I put the bit that actually says that, the important bit, at the end".

Joel does not use any grammatical terminology here (although he clearly understands the researcher's reference to syntax). However, his metalinguistic understanding has developed. He is better able to treat language as the object of observation and reflection, offering comments on rhetorical language choices; he is aware of both himself as reader and of others' needs as readers and of a clear purpose for the description; and he shows awareness of syntactical possibilities for emphasising an important detail: "I've left the important bit ('took the Glass Frog's hand in hers') at the end".

Case study analysis provided more examples of students' developing knowledge of the language and their ability to apply it in writing. This was linked to a more developed understanding of rhetorical intention, but there were very few instances of students being able to verbalise these connections by using grammatical terminology, and where the ablest writers attempted this, there was no clear developmental trajectory. For example, following explicit Y9 teaching of single and multi-clause sentences, Amy realised for the first time that "a clause has to have one verb", enabling her to identify the four separate clauses in one of her longer sentences, but she could not suggest how such highly descriptive sentences might enhance the writing. In a different

school, Sam's articulation of grammar knowledge seemed much less secure in Y9 than in Y7: confident definitions of sentence types in the first term of the study had by the final term become noticeably confused, to the point where he found it challenging to locate verbs in his writing. In "Everything is still", he argued that "still" was the verb, "because 'everything' in that one is like the thing and then 'still' is what it's doing". Clearly, young writers in this study found it difficult to articulate precise links between a grammatical feature and its effect in their writing, either because the grammar was not fully understood or because its impact could not be discerned or described.

Impact of teaching

Generalised and imprecise explanations of the rhetorical goal of writing descriptive detail were also evident within the theme "Pedagogic Practices", examples of which are shown in Table 4 below:

Table 4. Examples of generalised explanations of the rhetorical goal

Use of non-grammatical terminology in teachers' instructions	"I'm looking for high-quality descriptive sentences"; "Who put detail before a noun? After it?"; "Use your best describing words".
Generalised advice for improving writing	"The teacher told us to put a star where you need to put more stuff in… more detail about something or somewhere".
Imprecise targets that were not understood by students	Student interprets "Be more descriptive" as need for additional content: "I could have said more about what the trenches were like".
Checklists that encouraged non-evaluative deployment of linguistic features	"I've done speech marks, I've done a comma, I've done, where is it... I've done a question mark."; "I could have put in more ellipsis because I don't use too much of that".

Source: own work

In contrast, lesson observation data provided clear indications of pedagogic practices that enabled students' articulation of rhetorical goals and their application in writing. In a Y9 class, explicit teaching of noun phrases and lexical verbs enabled a weak writer's understanding of how to build description in his Gothic narrative, enhanced through personification:

- The trees stood still like they were waiting to try to reach the crumbling arch. All trees looked and stood the same swaying side to side waiting for something, someone, all leaves gone because of the blazing snow storm. "The trees, they're like alive and looking towards the graveyard, maybe protecting it".

In Anna's classroom, the teacher directly linked the focus on prepositional phrases to a relevant improvement target by saying, "I've noticed you need more description and less action in your writing", an emphasis that played out in students' writing:

- Harry saw Snape pouring potions into the cauldron. There he was with his lip curling into a menacing sneer, pouring smoky potions into the smouldering cauldron (able writer).
- Snape glared at Harry, swishing his cape around and around his body (weak writer).

In Joel's classroom, there was a strong emphasis on the impact of writerly choices, the teacher explaining the effect of "place adverbials" as "joining ideas together by leading the reader around the scene. I want you as an author to be able to take me around that scene", an emphasis that Joel referred to: "I was trying to describe what the place was like…what it is, where it is".

The data provide evidence that where teachers had themselves understood how the use of a specific grammatical feature could enhance students' writing, they were able to frame students' learning clearly, both in their planning and in classroom discourse. The most effective practitioners combined confident linguistic subject knowledge with an awareness of rhetorical impact.

Discussion

This analysis of young writers' metalinguistic understanding, both verbalised and applied, and its relationship to the teaching they received, highlights both pedagogical challenges and affordances. Firstly, with respect to the goal of writing with descriptive detail, understanding can be evident in writing but a struggle to articulate: students across the age and ability range were able to make appropriate and effective language choices that showed a developing awareness of the needs of a reader, but reflection that confidently combined

rhetorical and grammatical understanding was rare, a feature of the ablest writers, but even then, inconsistent over time.

Secondly, there was a marked lack of precision about how to achieve descriptive detail, seen in both teacher and student talk. In large part this was because semantic classroom definitions dominated thinking and discourse; for several students, the semantic understanding was privileged over grammatical understanding, with significant misapprehensions, primarily related to clause grammar, persisting over time. However, given the current statutory requirement for the use of grammatical terminology to discuss writing, it is important to note that in this study its use did not automatically correlate with precision in metalinguistic understanding. Grammar terms were particularly prominent in Y6 classrooms preparing for national tests, and the emphasis helped some children to grasp concepts they had previously struggled with, but it also led to "empty" grammar talk where terms were used without attendant conceptual understanding, or with no meaningful link to meaning-making in writing. In terms of the goal of writing descriptively, there were clear indications that teaching had not been linguistically explicit or specific enough to develop students' understanding.

Finally, the study shows that teachers' own linguistic subject knowledge was significant in enabling students' metalinguistic understanding. Those teachers who had a better grammatical knowledge of how texts work were able to make more powerful learning links between form and meaning. They were also better able to model for children how to verbalise metalinguistic choices in writing, combining grammatical explicitness with descriptions of rhetorical impact.

Conclusion

In considering what kind of grammatical knowledge might "enable teachers and students to describe how language does its work" Macken-Horarik *et al.* (2011, p. 9) in Australia and Kolln and Gray (2006) in the United States suggest the need for a "rhetorical grammatics", a broadening of classroom discourse to encompass authorial intention and text effectiveness as well as allowing linguistic precision. This study suggests a similar need in classrooms in the UK to re-envision the role of grammar and metalinguistic understanding in supporting young learners in becoming agentive writers, able to make writerly choices. At the same time, it signals the importance of pedagogical practices which model the verbalisation of metalinguistic decision-making in writing.

References

Australian Curriculum, Assessment and Reporting Authority [acara]. (2009). *Framing English.* Sydney: acara.

Bialystok, E. (1994). Analysis and control in the development of second language proficiency. *Studies in Second Language Acquisition*, *16*(2), 157-168. https://doi.org/10.1017/S0272263100012857

Bialystok, E. (2001). *Bilingualism in Development: Language, Literacy and Cognition.* Cambridge: Cambridge University Press.

Carter, R. (ed.) (1990). *Knowledge about Language.* London: Hodder and Stoughton.

Camps, A. & Milian, M. (eds.) (1999). *Metalinguistic activity in learning to write.* Amsterdam: Amsterdam University Press.

ccsi-ela. (2012). Common Core State Standards for Language Arts. ccssi. Retrieved from http://www.corestandards.org/ELA-Literacy

Department for Education. (2013). English Programmes of Study: Key Stages 1 and 2 [dfe-00181-2013]. London: DfE.

Derewianka, B. & Jones, P. (2010). *From traditional grammar to functional grammar: Bridging the divide.* Reading, uk: naldic.

Gombert, E. J. (1992). *Metalinguistic development.* Hemel Hempstead: Harvester Wheatsheaf.

Halliday, M. A. K. (1993). Towards a language-based theory of learning. *Linguistics and Education*, *5*(2), 93-116. https://doi.org/10.1016/0898-5898(93)90026-7

Halliday, M. A. K. (2003). Introduction: On the "architecture" of human language. In J. Webster, (ed.), *On language and linguistics.* Volume 3 in the Collected Works of M.A.K. Halliday (pp. 1-32). London and New York: Continuum.

Harper, H. & Rennie, J. (2009). 'I had to go out and get myself a book on grammar': a study of pre-service teachers; knowledge about language. *Australian Journal of Language and Literacy*, 32(1), 22-37.

Hudson, D. & Walmsley, J. (2005). The English Patient: English grammar and teaching in the twentieth century. *Journal of Linguistics*, *41*,593-622. Retrieved from https://www.uni-bi.de/lili/personen/walmsley/docs/The_English_Patient-2004.pdf

Jones, P. & Chen, H. (2012). Teachers' knowledge about language: issues of pedagogy and expertise. *Australian Journal of Language and Literacy*, *35*(2), 147-168. Retrieved from https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2540&context=edupapers

Kolln, M. J. & Gray, L. S. (2006). *Rhetorical Grammar: Grammatical Choices, Rhetorical Effects*. Longman Publishing.

Macken-Horarik, M. (2016). Grammar in wonderland: What might a re-imagined grammar look like in contemporary school English? *Metaphor*, *1*, 4-12. Retrieved from https://search.informit.com.au/documentSummary;dn=907075 803770504;res=IELHSS

Macken-Horarik, M., Love, K. & Unsworth, L. (2011). A grammatics "good enough" for school English in the 21st century: Four challenges in realising the potential. *Australian Journal of Language and Literacy*, *34*(1), 9-23. Retrieved from https://core.ac.uk/download/pdf/143856271.pdf

Micciche, L. (2004) Making a case for rhetorical grammar. *College Composition and Communication, 55*(4), 716-737. Retrieved from http://www.csun.edu/~bashforth/305_ PDF/305_PDF_Grammar/MakingACaseForRhetoricalGrammar_Micciche.pdf

Myhill, D. A. (2005). Ways of knowing: Writing with grammar in mind. *English Teaching: Practice and Critique*, *4*(3), 77-96. Retrieved from https://files.eric. ed.gov/fulltext/EJ847265.pdf

Myhill, D. A. & Jones, S. M. (2015). Conceptualizing metalinguistic understanding in writing. *Cultura y Educacion*, 27(4), 839-867. Retrieved from https://ro.uow. edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir= 1&article=2941&context=sspapers

Myhill, D. A, Jones, S. M., Lines, H. & Watson, A. (2012). Re-thinking grammar: the impact of embedded grammar teaching on students' writing and students' metalinguistic understanding. *Research Papers in Education*, 27(2), 1-28. https:// doi.org/10.1080/02671522.2011.637640

Polyani, M. (1966). The logic of tacit inference. *Philosophy*, *41*(155), 1-18. https://doi.org/ 10.1017/S0031819100066110

Williams, G. (2005). Grammatics in schools. In R. Hasan, C. Matthiessen & J. Webster (eds.), *Continuing Discourse on Language: A Functional Perspective* (Vol.1, pp. 281-310). London: Equinox.