***Let’s talk talk: Utilising metatalk for the development of productive collaborative dialogues***

**ABSTRACT**

This paper focuses on the role of metatalk within the context of an interventional study which explored the development of secondary school students’ collaborative talk. The intervention utilised a *collaborative talk framework*, designed specifically for the study, as a pedagogical tool to support two types of metatalk: *process* and *self-evaluative*. This paper examines the role of this metatalk in developing students’ awareness of collaborative talk processes, and considers how metacognitive skills and self-regulation were encouraged in the process. Making connections between dialogic teaching, educational linguistics and self-regulation research, this study argues that metatalk should be a key feature of pedagogies seeking to develop educational dialogues between peers, and should be included as part of a repertoire of effective classroom talk.

1. **INTRODUCTION**

Alexander asserts that discussion and dialogue are the ‘rarest yet also the most cognitively potent elements in the basic repertoire of classroom talk’ (2008: 31). Part of this repertoire, collaborative talk between peers, which involves sharing perspectives, negotiating, and resolving difference (Wells, 1986, 2009), has long been recognised for its educational potential (Barnes & Todd, 1977, 1997; Mercer & Littleton, 2007). Furthermore, in adult life and in the workplace, collaborative and communicative skills are considered highly important (Bercow, 2008; Cazden, 2001).

In practice however, few opportunities are provided for students to talk together in the classroom (Baines, Blatchford & Kutnick, 2003; Alexander, 2008). In an educational context where teachers are under pressure to fulfil curriculum and exam requirements, and concerned about student engagement (Galton, Hargreaves & Pell, 2009), it is perhaps unsurprising that peer activity in the classroom is side-lined and that ‘teacher talk’ is often used for behavioural and procedural purposes. In this context, it is therefore unsurprising if students’ notions of ‘good’ talk are shaped by behavioural and social, instead of, cognitive expectations and goals. Perhaps reinforcing this, the commonly occurring IRF discourse structure (initiation – response – feedback; see Myhill, 2006) privileges correct answers ‘already in the teacher’s head’, perhaps undermining the validity of talk between peers, while promoting competition over collaboration (Newman, 2015). Furthermore, the IRF relies on closed praise and labelling which may inadvertently endorse an ‘entity theory of learning’ (Yeager & Dweck, 2012), discouraging students from taking advantage of opportunities to learn with and from their peers.

Nevertheless, successive studies have demonstrated that carefully designed interventions and strategies can support productive dialogues between peers, with positive implications for cognitive development (Barnes & Todd, 1977; Cazden, 2001; Mercer & Littleton, 2007; Blatchford, Kutnick, Baines, & Galton, 2003; Wells, 2009). Although dialogic research is often situated in primary schools (Higham, Brindley & van de Pol, 2014), several studies have indicated the value of peer dialogue for learning and attainment in secondary Science, Mathematics and English (Mercer & Littleton, 2007; Coultas, 2006; Scott, Mortimor & Aguiar, 2006; Skidmore, 2008; Hardman, 2011; Galton, Hargreaves & Pell, 2009; Sutherland, 2006, 2013). While building on this strong foundation of research, this paper focuses in particular on the potentially valuable role of metatalk (Littleton & Mercer, 2013; Lefstein, 2010; Sutherland, 2006, 2013) in an intervention designed to support the development of collaborative talk in the secondary English classroom (Newman, 2015, 2016a, 2016b).

This intervention made particular use of a framework, designed specifically for the study, which described collaborative talk as an interpersonal process of *participating, understanding and managing*. Supported by this framework, students engaged in two types of metatalk: *process* metatalk and *self-evaluative* metatalk. *Process* metatalk focused specifically on the processes and language of collaborative talk, used in this intervention to analyze transcripts and video; and *self-evaluative* metatalk required students to reflect on and critique participation in their own collaborative dialogues. This process encouraged students to make explicit connections between the interpersonal characteristics of collaborative talk and how these appear in language. It was also surmised that this particular use of metatalk would prompt students to more ‘conscious’ participation, perhaps supporting the regulatory behaviours required for effective collaborative talk. Extending a discussion about metatalk in Newman (2016a), this paper explores the particular potential of *process* and *self-evaluative* metatalk to act as a pedagogical tool for developing understanding of the challenging processes of collaborative talk, while considering the potential of metatalk as a strategy for supporting meta-cognitive and self-regulatory processes.

More broadly, this study also contributes to a significant evidence base which attests to the valuable role of dialogue and discussion. This study was conducted during a period when policy recognized and promoted the development of collaborative talk and metatalk (DCSF, 2007; 2010). In particular, the intervention was designed specifically to address the (then) requirement that GCSE (the public examination for 16 year olds in England) students be assessed for their participation in an ‘engaging and responding task’ (see Edexcel, 2010). This intervention’s particular focus on the analysis of spoken language through metatalk was also pertinent to the (then) ‘study of spoken language’, which featured briefly at GCSE English Language (ibid). However, the new National Curriculum (DfE, 2013) and the downgrading of Speaking and Listening at GCSE to an unweighted assessment has undermined what were then important advances in the conceptualization of collaborative talk at policy level. At present, the prominence of presentational forms of talk in the curriculum does little to encourage students’ understanding of and responsiveness to each other (Sutherland, 2013), perhaps undermining the value of collective effort and reinforcing competition and individualism (Dewey, 1990; Newman, 2015).This study therefore joins extensive research in posing a challenge to recent curriculum reforms.

1. **THEORETICAL FRAMEWORK**

***2.1 Metatalk about the interpersonal processes of collaborative talk***

Sharing characteristics, exploratory talk (Mercer & Littleton, 2007; Mercer & Dawes, 2008) or dialogic interaction between peers (Alexander, 2008) involve engaging constructively with ideas and striving for common understanding or agreement. In the US and Australia, other characterisations of reciprocal, accountable and reasoned peer dialogues have emerged: ‘accountable talk’ (Michaels, O’Connor & Resnick, 2008; Cazden, 2001); ‘transactive talk’ (Azmitia, 1998) and ‘cooperative talk’ (Gillies, 2003). Expanding on these, the framework for collaborative talk (figure 1), designed for the purposes of this study, describes collaborative talk as an interpersonal process of *participating, understanding* and *managing.*

According to the first two strands, collaborative talk requires *active* contribution tothe exploration and development of ideas, and the negotiation of an outcome that represents the *participation* and *understanding* of all speakers. The third strand refers to the way in which speakers *manage* difference and challenge, and how they monitor their own participation and that of their peers. The framework and its use as a pedagogical tool was intended to emphasise how these three strands work *together* to shape a shared outcome (see Newman, 2016a for extended theorisation of the framework).

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|  | **During collaborative talk, speakers:** |
| **Participating** | Speak clearly and concisely |
| Share experiences and challenge ideas without conflict |
| Show respect for other people’s ideas |
| Build on other people’s ideas |
| **Understanding** | Listen carefully in order to understand what’s being said |
| Listen with an open mind |
| Use questions to explore ideas and ensure understanding |
| Make sure that they and everyone in the group understands |
| **Managing** | Manage the talk to make sure that goals are met |
| Keep the talk focused on the goal |
| Manage challenges and objections with sensitivity |
| Encourage others to contribute |

Figure 1: A framework for collaborative talk

Alongside intervention tasks, the framework informed and supported the development of students’ process and self-evaluative metatalk. In each of the 10 intervention lessons, students analysed a transcript or video of a ‘collaborative’ dialogue before engaging in and reflecting upon their participation in a thematically linked collaborative task. The transcripts and videos were devised or selected for their potential to provoke metatalk about the processes of collaborative talk. For example, students analysed: contrasting versions of the same dramatized dialogue; an authentic transcript of secondary school students engaged in a decision-making task; group discussions which featured on the television series *The Apprentice* and *The X Factor*. At the same time, lessons and tasks were structured to gradually scaffold students’ understanding and use of the terms *participating, understanding and managing* in their metatalk: at the beginning, students were asked to generate their own descriptors for collaborative talk before being shown the 12 outlined on the framework; afterwards, students moved from a consideration of their own descriptors for ‘good’ and ‘bad’ collaborative talk to an analysis of how they and other speakers *participate, understand and manage* in dialogue; towards the end, students were simply reminded to consider how speakers *participate, understand* and *manage* in their process and self-evaluative metatalk. The descriptors were therefore not intended as a ‘checklist’ but to exemplify potential features of these strands, which might of course overlap in their function. The intervention did not aim to present students with ‘idealised’ versions of collaborative talk, but to draw their attention to the subtle and nuanced ways through which speakers enact complex relations and achieve a shared outcome.

Taking a similar approach, The LINC materials (HMSO, 1990; Carter, 1991) emphasised the analysis of language-in-action. More recently, in relation to workplace communication training, Stokoe (2011; 2013) has advocated the analysis of ‘real’ talk, instead of role plays which she argues are informed by misconceptions of linguistic norms. Although, in the secondary English classroom, students’ role-play of ‘poor’ group talk has been used to generate discussion and agreement on ‘ground-rules’ for successful collaborative talk (Sutherland, 2006, 2013). Lefstein (2010) also points out that ‘idealised’ dialogue can provide a good point from which to critique talk. The *analysis* of talk, whether real, ‘poor’ or idealised, may provide an opportunity for students to explore how language can shape the outcome of a discussion, while also challenging or expanding perceptions of ‘good’ talk.

Furthermore, analysing the talk of others may support students in reflecting on and evaluating their own talk, perhaps important for the development of collaborative talk (Newman, 2016a; Sutherland, 2006, 2013). In a year-long action research project which investigated the development of collaborative talk (Sutherland, 2006; 2013), students engaged in collaborative talk and reflection on a fortnightly basis. Qualitative data analysis suggested that the successful development of students’ collaborative talk was related to students’ (and teachers’) engagement in ‘metadiscoursal reflection’ (Sutherland, 2013: 64). Sutherland argues that this metatalk supported students in gaining ‘conscious control over new discourses’ (2013: 64), enabling them to identify explicit group-talk hierarchies and silencing of students, which in turn encouraged students to develop strategies for supporting participation.

In educational linguistics (2013), Schleppegrell has also demonstrated the potential of explicit talk about language and meaning to encourage ‘consciousness-raising’ (2013: 155), which may prompt students to ‘notice’ their linguistic problems. Because ‘metatalk’ has been used predominantly in relation to L2 and foreign language learning (Swain, 1998), research in educational linguistics can attest further to its particular cognitive and metacognitive potential. Rooted in Halliday’s Systemic Functional Lingustics (SFL) (1978), Swain describes how metatalk uses language to reflect on language use: it is the ‘surfacing of language used in problem solving; that is, language used for cognitive purposes’ (1998: 69). Swain argues that it is an effective method for supporting L2 language learners, particularly ‘in contexts where learners are engaged in meaning-making…where the language being used and reflected upon through metatalk is serving a communicative function’ (ibid: 69). Metatalk therefore involves a ‘deeper level of attention’ which supports understanding about the relationships ‘between meaning, form and function’ (Storch, 2008: 96).

However, in contrast to the detailed linguistic and grammatical focus seen in research by Swain (1998) and Schleppegrell (2013), metatalk in this study’s intervention focused on the interpersonal dimensions of collaborative talk, as outlined by the framework. Halliday argues that the ‘interpersonal resources of language have been relatively neglected, treated as an appendage to the grammar rather than as an essential part of it’ (2003: 415). Via the framework and intervention tasks, metatalk was utilised to support the development of a language for reflecting on interpersonal group dynamics, with the aim of developing collaborative talk between peers. In the same way that learners’ capacity to *think* metalinguistically about writing and to *enact* that thinking may be enabled through high quality metatalk (Myhill & Newman, 2016), so might the understanding and application of collaborative talk processes be enabled through metatalk about its form and function in context sensitive scenarios.

***2.2 Metatalk and self-regulation***

By encouraging ‘conscious’ engagement, this study recognised that the success of collaborative talk relies not only upon students’ understanding of what productive collaborative talk ‘looks’ and ‘sounds’ like, but on students’ capacity for *regulating* their participation. Engaging in *challenging* discussions may also require resilience, something developed through the self-regulation of thoughts, feeling and actions (Yeager & Dweck, 2012).

Drawing together dialogic teaching and self-regulation research, Whitebread et al (2012; 2015) have explored the particular potential of talk between peers to encourage metacognitive processes and self-regulation. In one of the first projects to explore this relationship (Whitebread, Pino-Pasternak & Coltman, 2015), the ChAT project (Children Articulating Thinking) revealed that metacognitive and self-regulatory skills can be supported by developing students’ ability to use talk productively in groups. Furthermore, this and connected studies, have shown that levels of self-regulation are associated with advanced forms of ‘shared’ regulation during group work (Grau & Whitebread, 2012).

The role of talk, and the importance of *shared* regulation (ibid) and *relationships*, points to Vygostky’s theory (1978) that higher order skills over which children have control, independence and regulation, are achieved through the internalisation of *social* processes. Therefore, talk and language is closely related to self-regulation, as evidenced by a large body of early childhood research which has shown that toddlers with bigger vocabularies develop better self-regulation (Vallotton & Ayoub, 2011) and that pre-schoolers with better self-regulation have better early literacy (McClelland et al, 2007). This relationship between talk and self-regulation shows how talk can act as a cultural tool that allows knowledge to be shared, and as a psychological tool that structures the processes and content of individual thought (Vygotsky, 1986).

Utilising the cultural and psychological potential of talk, *meta*talk may be a particularly powerful mechanism for supporting self-regulation because it harnesses metacognitive processes to develop collaborative talk. Metatalk encourages students to make their thinking explicit in talk, then turn around on it, and reconsider it in order to develop understanding (Bruner, 1986), fostering ‘conscious’ use of something previously used ‘unconsciously’ (Vygotsky, 1978). This process may support the development of declarative *and* procedural knowledge (Gombert, 1992: 191); in the context of this intervention, *declarative* knowledge describes knowledge of the processes and principles of collaborative talk, while *procedural* knowledge is the ability to utilise this knowledge in talk.

In its emphasis on metatalk, this study draws on educational linguistics, while making a link between dialogic and self-regulation research, two strands which have until recently (Whitebread, Pino-Pasternak & Coltman, 2015; Mercer, 2013), rarely been connected.

1. **METHODOLOGY**

***3.1 The intervention***

The 10 lesson unit of work was taught over a 3-4 week period (timetable dependent). Teachers were provided with comprehensive lesson plans and resources for each lesson; these were designed with input from participating teachers and trialed by the researcher ahead of implementation. Each lesson followed a sequence of: analysis (process metatalk) task; thematically linked collaborative task; reflection (self-evaluative metatalk). As described in section 2.1, lessons were sequenced to scaffold students’ metatalk and understanding of the three framework strands; along side this collaborative tasks became increasingly ‘open’ as scaffolds to support participation were removed.

***3.2 Sample***

Because access is more restricted at secondary level (Higham, Brindley & Van de Pol, 2014), the sample was one of convenience, drawn from two co-educational secondary comprehensive schools located in the South West of England. The intervention was implemented in one (L1) English classroom in Bayside College and Spring Lane College (not their real names). At the time of data collection, both schools had an intake of approximately 1100 students aged 11-18, comprising mainly white British students who came from the town and surrounding rural areas. Teacher 1 (Bayside College) was in her second year of teaching, while teacher 2 (Spring Lane College) was in her fourth year of teaching.

In Spring Lane College, a class of 28 year 9 (aged 13-14), mixed gender and mixed ability students participated, while the class in Bayside College consisted of 32 year 10 (aged 14-15) high ability girls (classes were grouped by gender at GCSE level). The study did not exclude students with SEN (special educational needs) or EAL (English as a second language). In Spring Lane College, the class included one EAL student and one with EABD (emotional and behavioural difficulties).

Ahead of implementation, teachers were asked to arrange students in groups of 4, based on their knowledge of who might work constructively together. Because teacher 1 was less confident in her knowledge of her (then) relatively new class, she asked students to arrange themselves in pairs during a pre-intervention lesson; she then asked each pair to join with another pair, making a group of 4. These groups then completed a short collaborative activity, enabling the teacher to observe how students worked together, and make changes as necessary (no changes were made). More confident in her knowledge of the class, teacher 2 also arranged the groups in advance, but mixed by gender and ability. Groups would remain stable for the duration. A particular focus on the temporal development of the *group* unit in the naturalistic classroom, each a ‘microcosm’ within the wider class context, precluded the need for classes or groups to share particular characteristics.

***3.3 Informed consent***

Informed by the Ethical Guidelines for Educational Research (BERA, 2011), informed consent was sought from all participants and relevant parties. Consent forms were secured from project teachers after a series of meetings to discuss the project. A Memorandum of Understanding which outlined the responsibilities of researcher and teachers was signed by head teachers. Following a class presentation about the project, students were given personally addressed information letters and consent forms, which were signed by students and a parent/guardian, and returned. Celebrating their participation in the project, students were given a certificate and letter of appreciation at the end of the intervention.

***3.4 Data collection***

This research is positioned within a sociocultural paradigm which regards humans as creatures with a unique capacity for communication. Recognising the methodological challenges associated with exploring talk and joint intellectual activity (Mercer, 2008), multiple methods of data collection were used, not to ‘triangulate’, but to capture different contextual and temporal ‘dimensions’ and ‘lenses’ through which the development of collaborative talk could be viewed.

At the core of the research design was the collection of audio and video data: entire lessons were recorded via several discretely positioned cameras which captured the class as a whole, and the interactions of each group. Digital recorders were placed on each group’s table and the audio was later synchronized with the video footage, resulting in approximately 9 hours of video data for each group (8 groups in Bayside College and 7 groups in Spring Lane College). Additionally, teachers’ asides and interactions with groups and individuals were captured via an audio recorder worn for the duration of the intervention.

The core set of audio and video data was complemented by the collection of group interviews and assessment data, as well as individual student booklets and case descriptions of teachers and classes. However, the data analysis would later involve prioritizing some data sets over others: this paper focuses in particular on the form and development of students’ process and self-evaluative metatalk and therefore draws on the analysis of the core set of video and audio data.

***3.5 Data analysis***

The core set of video data was analyzed in layers: firstly, all of the data was observed and an intervention ‘narrative’ written for each group; against this ‘backdrop’, 5 groups from each class were selected (on the basis of audio quality) for coding; finally, substantial episodes were transcribed and commentaries written to exemplify and verify interpretations drawn from the coding.

Investigating the enactment and development of collaborative talk, the first layer of coding involved deductive coding of students’ turns against the framework. Turns were therefore coded according to their function: *participating [P], understanding [U] or managing [M].* Later, sub-codes were devised inductively to signal the specific form of these broadly coded turns. Particularly relevant to this paper, these included codes which signaled students’ *awareness* of collaborative talk processes, often demonstrated through a reference to the framework for collaborative talk, but not exclusively.

Because the value of counting turns is limited, the codes were instead ‘mapped’, alongside qualitative descriptions, across the intervention. This allowed the ‘patterns’ through which groups reshaped and modified thinking to be traced (Barnes & Todd, 1977: 9), thus avoiding the detachment of utterances from their context of use, recognizing that meaning must be interpreted within a ‘chain’ of dialogue. Informed by methods of sociocultural discourse analysis (Mercer, 2004), this approach maintained a focus on the historical and contextual nature of interaction.

Subsequently, substantial episodes of talk from each coded group were transcribed to verify themes which emerged through coding. It was intended that positioning the transcripts against a backdrop of coding and intervention ‘narratives’ would strengthen the reliability and trustworthiness of the data, and the conclusions drawn.

Enabling a rich insight into their talk, the transcripts and commentaries presented in the next section are drawn from one group in each school. While similar developments were observed in other groups, this paper does not claim generalities on the basis of the findings presented below, but does argue that ‘uniqueness of context does not entail uniqueness in every respect’ (Pring, 2000: 119).

4. **FINDINGS**

***4.1 The development of process metatalk***

*Process* metatalk involved explicit discussion and analysis of the interpersonal *processes* of collaborative talk. In this first section, episodes from lessons 3, 4 and 7, taken from one group in Spring Lane College, will show how intervention tasks and the framework for collaborative talk supported the gradual development of students’ *process* metatalk over time.

Episode 1 reveals these particular students’ preconceived notions of ‘good’ talk, while the two episodes which follow show how mis/understandings are revealed and sometimes challenged or developed as students begin to integrate references to the framework strands in their dialogues. The first episode is taken from lesson 3 and shows Evie, Ryan, Liam and Joseph generating ‘*effective*’ descriptors for the collaborative talk observed in a video (designed to contrast with a focus on ‘*ineffective’* collaborative talk in lesson 2). At this point, the terms *participating, understanding* and *managing* have not yet been introduced: these early tasks were designed deliberately to elicit students’ existing knowledge of collaborative talk processes and expectations, on which subsequent lessons would build.

***Episode 1***

Evie: On the before video, when they were, like, bad, they had a

really bad attitude.

Liam: There was no slang

Evie: Good attitude, no slang

Joseph: Good language

Liam: Listening to each other

Evie: Yeah

Liam: Thinking about what people say…

Evie: …and they expanded on each other’s ideas…so, good attitude…

Liam: …agreeing with each other…

Evie: …listen to each other, didn’t talk over each other...they kept on task

Liam: They achieved the goal…they kept, no…

Evie: They expanded on things?

Liam: Yeah, expanded answers…hey, slow down guys…no distractions

Evie: If they didn’t like someone’s ideas they didn’t snap back at them…

Ryan: …didn’t criticise…didn’t shout…

Evie, Ryan, Liam and Joseph compile a list of suggestions. Although students list characteristics, they do not link these explicitly to the talk they observe. Because the features identified are unrepresentative of the talk observed, it is possible to suggest that students’ suggestions are based on their *assumptions* of what makes talk ‘good’. By noting ‘listening’ and ‘expanding ideas’ as important characteristics, students show an appreciation of the need for group cohesion. They also refer to ‘good’ language and an absence of slang, while emphasising the need to agree and avoid criticism. Being ‘on task’, having a ‘good’ attitude and not ‘shouting’ are also considered important. While there is little sense here of what students believe these features ‘look like’ in talk, their comments suggest that ‘*effective’* talk requires ‘good’ behaviour, compliance and ‘proper’ English.

In lesson 4 below, students were introduced for the first time to the terms *participating, understanding* and *managing*. In this lesson, students were asked to analyse how speakers in a transcript *participate, understand* and *manage*. This was intended to support students in articulating how the features they were identifying (or those exemplified in the framework) were *functioning* in dialogue. These analysis tasks would also make new demands of students’ dialogues: disrupting, for example, a tendency to listing (apparent in the episode above) and encouraging a more exploratory discourse.

In this episode, the same group are discussing the positive and negative features of an authentic transcript featuring 5 boys (aged 13-14) discussing ideas for a music festival.

***Episode 2***

Evie: …so a negative point should be that they went off-task

Ryan: Went off-task with a Scottish accent

Joseph: Not focused with the table

Liam: Table?

Joseph: You know, they’re trying to move the table closer together

Evie: What did you say?

Joseph: They’re trying to move the table, they’re not focused

Liam: A positive point was they started off on-task but they went off-task very quick. It was literally after a couple of lines…they started off on-task…

Ryan: …and they did consolidate

Evie: So which would that be? Would that be under participating, understanding or managing?

Ryan: I know one for participating: they consolidated everyone in the group. When they go, ‘I think we should do music. Anyone else agree with me?’

Evie: So participating, involving everyone in the group.

Ryan: So Liam, which one did you say a minute ago?

Liam: I said they started on task but went off-task really quick

Teacher: Yeah, so what’s that lack of?

Liam: Participating

Teacher: Participating, is it participating?

Ryan: I think it’s managing

Teacher: I think it’s managing

Ryan: Because if you’re managing then you stay on-task. There is a bit on the second page when he tries to get them to go back on task

Initially, students focus on behavioural aspects: they recognise the distinction between ‘on’ and ‘off task’ behaviour; they point out that a speaker in the transcript is putting on a Scottish accent, and that others are moving tables. But the discussion moves away from this when Ryan interjects, noting that speakers ‘did consolidate’. This prompts Evie to ask which framework strand describes ‘consolidate’. Ryan expands his earlier comment, making a connection between ‘consolidating’ and the question, ‘anyone else agree with me?’ Evie recognises that this question functions to involve everyone in the discussion. Ryan recalls Liam’s earlier point about being off-task. The teacher’s interjection reminds students to connect their points to the framework, prompting Ryan to build on Liam’s point by making a connection between off-task talk and *managing.*

Nevertheless, the potential limitations of categorising utterances according to the framework strands are apparent in this episode. Categorising here may limit students’ capacity to see the overlap between utterance and function; however, this episode features students’ first attempts to grapple with the framework strands in their process metatalk. Their categorisation may be considered a useful starting point in a longer sequence of lessons which seeks to bring about, through collaborative talk and metatalk, students’ recognition of how utterances in fact overlap in their function.

The final episode in this section, taken from lesson 7, shows the same group analysing a transcript from the X Factor. Here, students were not asked explicitly to refer to the framework strands.

***Episode 3***

Evie: They don’t say, yeah, ‘I *understand*…I see that they’re good, *but* I don’t think they’re going to win.’ They just say no.

Liam: They just rubbish their ideas

Ryan: They don’t listen with an open-mind either, they just say no or yes, they don’t expand on anything either

Liam: Yeah, they just say no no no no, not *why?*

Evie: So they don’t build on each other’s ideas

Liam: They don’t say *why* they don’t agree they just say no

Evie: I think on most of them I don’t think they really agreed on it

Liam: They obviously do after a while but they don’t really

Evie: And on this bit, when Kelly’s saying, ‘on a realistic note…’ no one’s asking her, they didn’t let her finish, they all just kept interrupting

Liam: And they don’t really come up with an answer on each person

Joseph: They’re just half-way through talking about it and just move on to someone else

In this final episode, the ‘quality’ of students’ process metatalk has improved: their analysis is aligned more closely with the transcript, and words and phrases perhaps appropriated from the framework support the articulation of ideas. Firstly, Evie formulates a hypothetical response which functions to seek agreement and *understanding*. Her suggested response, ‘I understand…*but*’, demonstrates an appreciation of how speakers might *manage* challenges. Other students also refer to the brevity of responses in the transcript: they regard a blunt ‘yes’ or ‘no’ to suggest that speakers are unconcerned with understanding, exploring or expanding on alternative points of view. Like Evie, Liam proposes that engaging in the dialogue ‘with an open mind’ might include asking the question *why*? In particular, students here appear to recognise a lack of understanding and cohesion between speakers, and that the dialogue fails to move towards a conclusion.

Students make connections between the language of the talk and the feature or function they describe, aligning their analysis more closely with the transcript. A tendency to formulate hypothetical responses, observed in several groups, also indicates a developing awareness of the *language* of collaborative talk. In particular, it is apparent that, students’ notions of ‘good’ talk have developed since lesson 3 (episode 1): students recognise the importance of asking *why*, of exploring and challenging ideas, indicating a developing appreciation of collaborative talk as an *active* process of participation.

***4.2 Self-evaluative metatalk***

As well as *process* metatalk, students also engaged in *self-evaluative* metatalk in each lesson. After engaging in collaborative tasks, students used self-evaluative metatalk to reflect on and critique the quality of their participation. Taken from lesson 7 alone, episodes 4-6 below feature Naomi, Olivia and Sarah (Gemma is absent) from Bayside College.

To encourage challenging dialogues, collaborative tasks were devised deliberately to provoke consideration of alternatives. By having to grapple with alternatives, students had to *manage* different points of view in order to complete the tasks as required. Episodes 4 and 5 below are examples of this: they demonstrate how elaboration sometimes emerges through dispute, and how students must *manage* this dispute. Episode 6 then shows the group engaged in the final task of the lesson: self-evaluative metatalk about the nature and quality of their participation. In the first episode below, students are discussing a ‘starter’ question: *how do you show respect to each other in talk?*

***Episode 4***

Olivia: (Reading question) How do you show respect to other people during a discussion? a) being rude, aggressive and not listening b) being soft, passive and agree with everything?

Naomi: Neither

Olivia: Does it have to be a or b, then I don’t think it’s either, you shouldn’t be a at all, you shouldn’t be rude or aggressive and not listening…

Naomi: …but you shouldn’t just agree with everything someone says and not put any opinion in to it, so like, say, you were just doing all the talking and me and Sarah just sat here going yes yes yes yes\_

Olivia: Yes, you shouldn’t ever do that. Sarah?

Sarah: Yeah?

Olivia: Thoughts?

Sarah: You said my thoughts, you basically said everything

Olivia: Ok. So kind of neither, obviously you should be quite soft but you definitely shouldn’t agree with everything but you shouldn’t disagree with things in a rude way

Sarah: I think showing respect is considering their, like, ideas…

Olivia: …yeah…

Sarah: and building on it as well…

Olivia: …building on ideas and kind of…

Sarah: …respect doesn’t just mean you just go along with it…

Olivia: …yeah

Olivia, driving the discussion forward, begins by reading the question and later clarifying the requirements of the task. Olivia’s early assertion that you shouldn’t be ‘rude and aggressive…’ is challenged and extended by Naomi’s ‘*but*…’ Naomi reinforces her argument by stating that, hypothetically, it would be wrong for her and Sarah to passively accept all opinions put forward by Olivia. Perhaps creating a ‘ground rule’ for their group, Olivia concurs by stating categorically that you ‘shouldn’t ever do that’. Sarah, on the basis that her ‘thoughts’ have already been voiced, indicates an initial unwillingness to agree or develop what has been said. Nevertheless, Olivia perseveres by consolidating the discussion so far. In a change of tone, Sarah makes a comment about respect: is it possible that Sarah reflected on her earlier response to Olivia and was prompted to more productive participation?

In episode 5, students are engaged in a collaborative task which required them to form a music band comprising 5 X Factor contestants of their choice (from a choice of 12). This task was deliberately designed to challenge students’ capacity for managing their personal preferences and encouraged them to consider the compatibility of contestants based on the information provided. Preceding this, students discussed the ‘*ineffective*’ features of the X Factor script (as in episode 3).

***Episode 5***

Olivia: Right, now, they’re obviously the basis of our band (placing contestant information cards on the desk) because you need someone from every category and they’re the only ones we have, yeah, so, um, I have to say…

Naomi: I’d like a young band…

Olivia: …you have to choose someone from every category. She’s better than him (pushing cards forward)

Sarah: No he’s not

Naomi: Let’s look at these things (information cards)

Olivia: She was…

Sarah: …no she isn’t…

Olivia: She’s amazing, she’s such a good singer…

Sarah: …she’s horrible

Naomi: Let’s think about…(Sarah and Olivia continue to argue) Stop. Let’s not think about the thing, let’s look and see what they have in common with other people from these groups. So his favourite artist is Dave…

(Students discuss the information available for each contestant)

Olivia: So he goes. Janet…I think Amelia’s more rocky (moving information cards to visualise bands)

Sarah: Yeah

Naomi: I think that

Sarah: Yeah, I can see it

Naomi: Yeah, I can see that, yeah

Olivia: So that (moving cards)… favourite music basically, she’s into pop artists…

Naomi: I don’t know…

Sarah: They both like Beyonce don’t they?

Naomi: Can we try the other one out? (swapping cards)

Olivia: I think Kitty works better

Naomi: I think she does as well

Olivia: But look, she’s in to Lady Gaga. Do you think that people like Beyonce, Nicky, pop artists now, she’s into Pink, Stevie Wonder\_

Sarah: I think…

Naomi: But then we’ve only got one boy

Sarah: It doesn’t matter

Naomi: Yes, I think this

Olivia: It’s like the reverse of the Black Eyed Peas

Sarah: Yes, I can see it now

Olivia: The reverse of the Black Eyed Peas. So this is our band

Naomi: Yeah

Sarah: Yeah

Despite having discussed respect in episode 4, students’ initial exchanges reveal their disregard for each other’s opinions; in fact, their exchanges are resonant with characteristics of the X Factor script analysed beforehand. Naomi attempts to *manage* this discord by drawing attention to the task and the basis on which their decisions should be made. Prompted by this management move, the discussion moves forward as students grapple with their options until they can all ‘see’ their shared decision.

***Episode 6***

Olivia: Participation…everyone spoke

Naomi: Yeah

Sarah: We all shared our ideas and helped build on them

Olivia: Yeah, everyone spoke, we shared ideas and we built on each other’s ideas

Naomi: Everyone spoke, shared ideas and built on other’s ideas…and everybody also showed respect for everybody’s ideas

Olivia: How did we…Understanding

Naomi: We listened carefully to each other…

Olivia: I don’t think we listened carefully so much as we listened with an open-mind

Naomi: Yeah…I don’t know what the difference is

Olivia: Listen carefully is…I say we listened with an open-mind and we questioned each other’s ideas in a good way…

Sarah: …we challenged them

Naomi: Yeah, we challenged them and made sure everybody understood what we were saying…

Sarah: …and gave reasons

Olivia : So we listened with an open mind, we questioned and challenged ideas respectfully…and managed

Naomi: We managed to keep the talk focused…

Olivia: …we kept it on task and we met the goal and we resolved any, like, arguments we had…

Naomi: …any conflicts…

Sarah: …we used questions as well

Naomi: Um, what you writing? Kept the talk focused on the task…

Sarah: …we used questions

Olivia: …we didn’t really…we encouraged others to contribute

*Pause while teacher talks to class*

Naomi: Yes

Olivia: Ah…um…you say yes, but…

Naomi: …because…

Olivia: …but we did conflict…but at the same time we resolved it so yes

Naomi: You’re going to get conflict no matter what but the key is if you can resolve the conflict…

Sarah: …conflict challenges you and helps you to open your idea more, build on it…

Naomi: …overcome…

Olivia: …sometimes conflict can actually lead to a new idea…when we’re fighting about something and one of you says something like, oh actually, *if we…*

Drawing on the framework, the self-evaluative metatalk above prompts students to consider how they *participated*, sought *understanding* and *managed* the preceding collaborative discussion (episode 5). However, their evaluation does not accurately reflect their preceding discussion: for example, students agree that they participated respectfully by ‘sharing’ and ‘building’ on ideas. Nevertheless, they grapple with what it means to listen with an open mind; Olivia prompts consideration of questioning as a ‘good’ thing and, resolving arguments is identified as an aspect of *managing*. When Sarah states that ‘we used questions’, Olivia appears to disagree: ‘we didn’t really’, prompting some *re-evaluation*. Olivia goes on to suggest that their talk featured conflict, and that resolving the conflict was important, prompting students to jointly reflect on the important role of challenge and resolution: Naomi reiterates Olivia’s point and Sarah describes how conflict ‘challenges’ and develops ideas, while Olivia concludes by raising the possibility that conflict gives rise to ‘new’ ideas.

Although their self-evaluative metatalk does not accurately represent their collaborative talk, this transcript does show how students eventually acknowledge the role of conflict in their dialogue. In their final comments, Sarah and Olivia may be referring to how their own understandings have developed or altered in response to challenge or conflict. They are not only considering the function of their talk, but the influence this type of talk has on their thinking and learning. A thread runs throughout this lesson: the theme of respect, challenge and idea generation. This thread is tied together here in their self-evaluative metatalk: the unproductive features of their earlier discussions become productive.

1. **Discussion**

***5.1 Process and self-evaluative metatalk: ‘Exploring the gap’***

Drawing on educational linguistics (Halliday, 1978; Schleppegrell, 2013), this intervention harnessed the potential of metatalk to activate language learning processes (Swain, 1998; Storch, 2008). Utilizing the framework for collaborative talk, each lesson involved an episode of *process* and *self-evaluative* metatalk. The terms ‘process’ and ‘self-evaluative’ have been used to distinguish between two types of metatalk: one used to discuss the processes of collaborative talk, and one which required students to ‘turn talk in’ on their own dialogues. Both types of metatalk encouraged students to engage more ‘consciously’ (Schleppegrell, 2013) and ‘notice’ *gaps* in linguistic understanding or competency (Swain, 1998). The repetition of process and self-evaluative metatalk, alongside thematically linked collaborative tasks, was a means of *exploring* the ‘gap’: between different notions of ‘good’ talk; between students’ talk and that analysed; between the form and function of utterances.

Section 4.1 traces the development of one group’s process metatalk. These short episodes indicate the group’s developing awareness of the interpersonal processes of collaborative talk. In episode 1, there is a ‘gap’ in students’ analysis because the features they identify are not representative of the talk observed. Instead, they may be based on assumptions about what constitutes effective talk: ‘on task’ behaviour, avoiding ‘criticism’ and seeking agreement. Students’ observations may echo ‘rules’ which are implicitly and explicitly promoted by teachers and parents: good attitude, no slang, interruption, criticism, shouting, distractions, etc. But building on these initial ideas, subsequent episodes show the group beginning to align their metatalk more closely with the transcripts, and demonstrating an increasing understanding of the active processes of collaborative talk.

But these episodes also show a development in the *form* of students’ process metatalk, perhaps indicating that tasks which utilised the framework supported the development of declarative knowledge *and* procedural knowledge (Gombert, 1992). In episode 2, the tendency to ‘collate’ ideas, apparent in episode 1, is disrupted by the introduction of the framework strands; here, students were asked to consider explicitly in their analysis how speakers were *participating, understanding* and *managing*. Having to explore and question the function of utterances in the transcript alters the discourse, encouraging students to clarify and question each other’s ideas, appropriating more the principles of *challenging* collaborative dialogues. Students also begin to integrate words and phrases from the framework descriptors to support their articulation of ideas. ‘Closing the gap’, students make explicit connections between the words speakers use and their function in the context of the transcripts analysed. Furthermore, students grapple with words which they ‘might say *if*…’, suggesting that students are making connections between the talk observed and their own words, likely supporting the development of their own participation in collaborative talk.

In section 4.2, we see another (less harmonious) group engaged in three tasks from lesson 7. These episodes do not provide an insight into the temporal development of their talk, but how the sequence of tasks, culminating in self-evaluative metatalk, may have supported students’ recognition of the disputational aspects of their dialogues. The first task (episode 4) poses a question about challenge and respect in collaborative dialogue; thematically linked, the group then engage in a collaborative task (episode 5) designed deliberately to challenge students’ management of personal preference. In both episodes, students experience and manage discord, but without encouraging compliance. Reflecting explicitly upon this, the lesson culminates in *self-evaluative* metatalk (episode 6). Initially, this group’s ‘faux’ evaluation indicates how they think their talk *should* look, resonating with episode 1. But as they grapple with the role of conflict in their talk, new understandings about the value of non-compliant, active engagement appear to emerge.

***5.2 Managing challenging dialogues***

Via the framework, this study emphasised the active, challenging processes of collaborative talk as a focus for students’ process and self-evaluative metatalk. This is because, while agreement may be the goal of collaborative activity, it is the *striving* for agreement which is most important for cognitive growth (Howe, 2010). Through the expression and exploration of difference, elaboration emerges (Pollack & Ben-David Kolikant, 2012). And it is the ‘elaboration and justifications of certain positions’ which supports cognitive growth (Brown & Palincsar, 1989: 408), not sparse interaction or passive compliance. It is arguable that agreement and synthesis has been over-emphasised in characterisations of productive peer dialogues. The convergence metaphor, commonly associated with conceptualisations of productive peer dialogue, may be limited because it does not adequately promote the value of dissonance (Pollack & Ben-David Kolikant, 2012). Teachers may need to encourage students’ appreciation of dissonance, but also support the development of strategies with which to *manage* it.

While collaborative talk requires a level of linguistic competence, engaging in active, *challenging* collaborative dialogues also requires effective *management* of talk. Engaging productively with alternative points of view requires students to encourage, monitor and critique contributions, while driving the talk towards a conclusion. *Managing* talk may therefore be considered a metacognitive process (Newman, 2016a) because it emphasises co and self-regulation. Therefore, encouraging metatalk about the *managing* strand of the framework for collaborative talk may support students’ explicit consideration of the metacognitive and regulatory behaviours which make productive, challenging dialogues possible. Furthermore, emphasising *shared* management, or co-regulation, may support a collaborative ethos which promotes shared responsibility. This may be significant considering the claim that metacognitive skills and self-regulation are considered difficult to achieve in the classroom because of the requirement that students take responsibility (Higgins et al, 2014), something which may also deter teachers from utilising collaborative talk.

***5.3 Collaborative talk and self-regulation***

It may be possible that developing students’ awareness and application of collaborative talk processes supports metacognitive and self-regulatory skills. Through process and self-evaluative metatalk, students in this study came to engage more ‘consciously’ with some processes of collaborative talk, and with each other. As noted above, the changing form of *process* metatalk in section 4.1 suggests that students *enacted* some oftheir developing knowledge of collaborative talk processes. Furthermore, the increased ‘cohesion’ of students’ utterances may indicate a commitment to *shared* understanding and *joint* management, and therefore, a developing ability to *co*-regulate collaborative talk. In section 4.2, although there is a visible ‘gap’ between this group’s talk and their evaluation, it is possible that by reflecting on their participation through *self-evaluative* metatalk, students came to recognise and appreciate the role of conflict in their dialogues. It is possible to surmise therefore that, as well as revealing ‘gaps’ in students’ awareness of collaborative talk processes, process and self-evaluative metatalk may expose the disruptive consequences of unproductive contributions, perhaps motivating students to engage differently, and perhaps more ‘consciously’, and collaboratively, with their peers.

***5.4 Limitations***

The transcripts presented above represent very small snapshots in time of only two groups’ talk and metatalk within the wider intervention. As noted in section 2.1 and 3.1, the intervention scaffolded students’ metatalk over 10 lessons; therefore, some transcripts show students grappling (sometimes awkwardly) with new concepts or language, but as a ‘step’ in a longer learning journey. There are of course multiple factors which may have affected the dialogues above and shaped longer development. For example, although steps were taken to minimize the intrusion of recording equipment, its presence inevitably affects talk and engagement: while in school 2, students seemed motivated by the prospect of being recorded, this seemed less the case in school 1. In school 1 the teacher and class were understandably more concerned with forthcoming GCSE assessments, possibly bringing the validity of an extended unit on collaborative talk in to question for the students. The teachers also used talk differently, inevitably influencing the talk and metatalk that occurred in student groups, something explored in depth in Newman (2016b). While the lesson sequence was consistent and tasks were designed to support participation, they would have varied in their potential to engage students’ interest, and the framework itself may have been more or less helpful dependent on its use. However, as noted elsewhere (Newman, 2016b), the development of collaborative talk is not a linear or predictable process: it may develop and regress over time, shifting according to tasks set, but also in response to social and environmental factors. This paper attempts to demonstrate that developing co and self-regulation through talk may in fact support students in managing influences and obstacles more effectively and creatively.

1. CONCLUSION

This paper proposes the terms *process metatalk* and *self-evaluative metatalk* to describe and distinguish between two types of metatalk which may support the development of collaborative talk. Focusing on the interpersonal processes of collaborative talk, metatalk in this study appeared to expand students’ awareness of collaborative talk as an active, challenging process. The possibility has been raised that, by harnessing metacognitive processes, intervention tasks designed to encourage process and self-evaluative metatalk may facilitate a shift to meta-level thinking. Furthermore, because well-*managed* collaborative talk involves co-regulation and, because social interaction may be internalised (Vygotsky, 1978), developing *co*-regulation in peer groups may support *self*-regulatory processes (Volet & Vaurus, 2013; Winsler et al, 2009; Grau & Whitebread, 2012).

Though research connecting dialogic teaching and self-regulation is relatively new, there is a rapidly growing body of evidence which indicates the value of developing self-regulation through talk (Grau & Whitebread, 2012; Mercer, 2013; Whitebread, Pino-Pasternak & Coltman, 2015). This study makes a contribution to this developing area of research by drawing attention to the particular potential of process and self-evaluative metatalk as a pedagogical strategy to develop collaborative dialogues which harness metacognitive processes and support self-regulation.

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***References***

Alexander, R. (2008). *Towards Dialogic Teaching: Rethinking Classroom Talk*. Cambridge: Dialogos.

Azmitia, M. (1998). Peer interactive minds: developmental, theoretical, and methodological issues. In Faulkner, D., Littleton, K. and Woodhead, M. (eds). *Learning Relationships in the Classroom*. London: Routledge.

Barnes, D. and Todd, F. (1977, 1997). *Communication and Learning in Small Groups*. London: Routledge and Kegan Paul.

BERA. (2011). *Revised Ethical Guidelines for Educational Research*.

Berardi-Coletta, B., Buyer, L. S., Dominowski, R. L., & Rellinger, E. R. (1995).

Metacognition and problem solving: A process-oriented approach. *Journal of*

*Experimental Psychology: Learning, Memory, and Cognition, 21*(1), 205-223.

Baines, E., Blatchford, P. andKutnick, P. (2003). Changes in grouping practices over primary and secondary school, *International Journal of Educational Research,* 39, 9-34.

Blatchford, P., Kutnick, P., Baines, E. and Galton, M. (2003). Towards a social pedagogy of classroom group work. *International Journal of Educational Research*, 39, 153-172.

Britton, J. (1970). *Language and Learning*. Middlesex, England: Pelican.

Bruner, J. (1986). *Actual Minds, Possible Worlds*. Harvard University Press.

Castells, M. (2005). The network society: From knowledge to policy. In Castells, M. and Cordoso, G (eds), *The Network Society: From Knowledge to Policy.* The Centre for Transatlantic Trade: Washington, DC.

Carter, R. (1991) *Knowledge about Language in the Curriculum: The LINC reader*. London: Hodder & Stoughton.

Cazden, C.B. (2001). *Classroom Discourse: The Language of Teaching and Learning.* New Hampshire: Heinemann.

Coultas, V. 2006. *Talking and Learning in Challenging Classrooms: Strategies for Behaviour Management and Talk-Based Tasks*. London: Routledge.

DfE. (2013). *National Curriculum in England: English Programmes of Study*. London: Derpartment for Education.

Edexcel. (2010). *GCSE English Specification*. Pearson.

Galton, M, Hargreaves, L & Pell, T, 2009, Group work and whole-class teaching with 11- to 14-year-olds compared, *Cambridge Journal of Education,* 39, 119–40.

Gillies, R. (2003). Structuring cooperative group work in classrooms. *International Journal of Educational Research,* 39 (1), 35-49.

Gillies, R. and Ashman, A. (1998). Behavior and interactions of children in cooperative

groups in lower and middle elementary grades. *Journal of Educational Psychology*, 90.

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

Halliday M.A.K. (1994) *An introduction to functional grammar*. London: Hodder.

Grau, V. and Whitebread, D. (2012). Self and social regulation of learning during collaborative activities in the classroom: The interplay of individual and group cognition. *Learning and Instruction*, 22 (6), 401-12.

Halliday, M.A.K. (1978). *Language as social semiotic: Social interpretation of language and meaning*. London: Open University.

Halliday, M.A.K. (2003). *On Language and Linguistics*. London: Continuum.

Hammersley, M. and Atkinson, P. (2007). *Ethnography: Principles in Practice. (3rdedition).* London: Routledge.

Hardman, F. 2011. “Promoting a Dialogic Pedagogy in English Teaching.” In *Debates in English Teaching*, eds. Davison, C. Daly, and J. Moss, 36–47. Abingdon: Routledge.

Higham, R. J. E., Brindley, S., & Van de Pol, J. (2014). Shifting the primary focus: assessing the case for dialogic education in secondary classrooms. *Language and Education*, 28 (1), 86 - 99.

Higgins, S., Katsipataki, M., Kokotaski, D., Coleman, R., Major, L.E. and Coe, R. (2014). *The Sutton Trust-Education Endowment Foundation Teaching and Learning Toolkit*. London: Education Endowment Foundation.

Howe, C. (2010). Peer dialogue and cognitive development: two-way relationship? In Littleton, K. and Howe, C. (eds). *Educational Dialogues: Understanding and Promoting Productive Interaction.* London: Routledge.

HMSO. (1990). Language in the National Curriculum: Materials for Professional Development.

Lefstein, A. (2010). More helpful as problem than solution: some implications of situating dialogue in classrooms. In Littleton, K. & Howe, C. (eds). *Understanding Dialogues: Understanding and Promoting Productive Interaction.* London: Routledge.

Littleton, K. and Mercer, N. (2013). *Interthinking: Putting Talk to Work*. London: Routledge.

Mercer, N. (2004). Sociocultural discourse analysis: analysing classroom talk as a

social mode of thinking. *Journal of Applied Linguistics*, *1* (2), 137-168.

Mercer, N. and Dawes, L. (2008) The value of exploratory talk. In Mercer, N. and Hodgkinson (eds), *Exploring Talk in Schools*. London: Sage.

Mercer, N. and Littleton, K. (2007). *Dialogue and the Development of Children's Thinking: A Sociocultural Approach.* London: Routledge.

Mercer, N. (2008). The seeds of time: Why classroom dialogue needs a temporal analysis. *Journal of the Learning Sciences*, 17 (1), 33-59.

Mercer, N. (2013). Classroom talk and the development of self-regulation and metacognition. In D, Whitebread, N, Mercer, C, Howe, C and A Tolmie (eds) (2013). Self-regulation and dialogue in primary classrooms, British Journal of Educational Psychology Monograph Series II: Psychological aspects of education – current trends, no. 10. Leicester: British Psychological Society.

Michaels, S., O-Connor, C. and Resnick, L.B. (2008). Deliberative discourse idealised and realised: Accountable talk in the classroom and civic life. *Studies in Philosophy of Education*, 27 (4), 283-297.

McClelland, M. M., Acock, A.C., Piccinin, A., Rhea, S.A. and Stallings, M.C. (2013). Relations between preschool attention span-persistence and age 25 educational outcomes. Early Childhood Research Quarterly, 28 (2), 314-324.

Myhill, D. (2006). Talk, talk, talk: Teaching and learning in whole class discussion. *Research Papers in Education*, 21 (1), 19-41.

Myhill, D. and Newman, R. (2016) Enabling metalinguistic discussion about writing. *International Journal of Educational Research*.

Newman, R. (2015) [‘All in favour, say aye!’ Voting in pupils’ collaborative talk.](http://scholar.google.com/scholar?q=%22‘All%20in%20favour,%20say%20aye!‘%20Voting%20in%20pupils‘%20collaborative%20talk.%22+Newman%20RMC) *Changing English: Studies in Culture and Education* 22 (1), 87-98.

#### Newman, R. (2016a) Working Talk: Developing a framework for the teaching of collaborative talk. Research Papers in Education, 31 (1): 107-131.

Newman, R. (2016b) Engaging talk: One teacher’s scaffolding of collaborative talk. *Language and Education.*

Pollack, S. and Ben-David Kolikant, Y. (2012). Collaboration amidst disagreement and moral judgement: The dynamics of Jewish and Arab student’ collaborative inquiry into their joint past. International Journal of Computer Supported Collaborative Learning, 7 (10), 109-128.

Pring, R. (2000) *Philosophy of Educational Research*. London: Continuum.

Schleppegrell, M. (2013). The role of metalanguage in supporting academic language development. Language Learning, 63 (1), 153-170.

Scott, P. H., E. F. Mortimer, and O. Aguiar. (2006). The Tension Between Authoritative and Dialogic Discourse: A Fundamental Characteristic of Meaning Making Interactions in High School.” *Science Education* 90 (4), 605–631.

Silverman, D. (1993). *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*. London: Sage.

Skidmore, D. 2008. Once more with feeling: Utterance and social structure. *Text and Talk* 28 (1):79–96.

Storch, N. (2008) Metatalk in a pair work activity: Level of engagement and implications for language development. *Language Awareness*, Multilingual Matters, 17 (2), 95-114.

Swain, M. (1998). Focus on form through conscious reflection. In C. Doughty & J. Williams

(Eds.), *Focus on Form in Classroom Second Language Acquisition*. New

York: Cambridge University Press.

Stokoe, E.H. (2013). The (in)authenticity of simulated talk: Comparing role-played and actual conversation and the implications for communication training. *Research on Language and Social Interaction*, *46* (2), 1-21.

Stokoe, E.H. (2011). Simulated interaction and communication skills training: The ‘Conversation Analytic Role-play Method’. In C. Antaki (Ed.), *Applied Conversation Analysis: Changing Institutional Practices*. Basingstoke: Palgrave Macmillan

Storch, N. (2008) Metatalk in a pair work activity: Level of engagement and implications for language development. *Language Awareness*, Multilingual Matters, 17 (2), 95-114

Sutherland, Julia (2015) [Going ‘meta’: using a metadiscoursal approach to develop secondary students’ dialogic talk in small groups.](http://sro.sussex.ac.uk/48100/) *Research Papers in Education*, 30 (1), 44-69.

Sutherland, Julia (2006) [Promoting group talk and higher-order thinking in pupils by 'coaching' secondary English trainee teachers.](http://sro.sussex.ac.uk/26647/) *Literacy*, 40 (2), 106-114.

Valllotton, C.D. and Ayoub, C. (2011). Use your words: The role of language in the development of toddlers’ self-regulation. *Early Childhood Research Quarterly*, 26 (2), 169-81.

Volet, S. and Vaurus, M. (eds) (2013). *Interpersonal regulation of learning and motivation: Methodological advances*. London: Routledge.

Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes.*  Harvard University Press.

Vygotsky, L.S (1986). *Thought and language* (A. Kozoulin, Ed. and Trans.). Cambridge, MA: MIT Press.

Wells, G. (1999). *Dialogic Inquiry: Toward a sociocultural practice and theory of education.* Cambridge: Cambridge University Press.

Wells, G. (2009). *The Meaning Makers: Learning to Talk and Talking to Learn*. Bristol: Multilingual Matters.

Whitebread, D., Pino-Pasternak, D and Coltman, P. (2015) Making learning visible: The role of language in the development of metacognition and self-regulation in young children. In Robson, S. and Flannery Quinn, S (eds) (2015) The Routledge International Handbook of Young Children’s Thinking and Understanding. Routledge

Yeager, D.S and Dweck, S. D. (2012) Mindsets That Promote Resilience: When Students Believe That Personal Characteristics Can Be Developed,

Educational Psychologist, 47:4, 302-314.