

**The multimodal texture of engagement: prosodic language, gaze and posture in engaged, creative classroom interaction**

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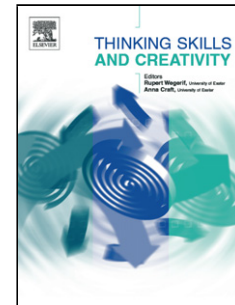
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Title Page

**The multimodal texture of engagement: prosodic language, gaze and posture in engaged, creative classroom interaction**

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### Highlights

1. Engagement in classroom interaction is proposed as a dynamic process rather than a state or response to pedagogy.
2. The texture of engagement is exemplified through specific instances of semiotic work of embodied modes of speech, gaze and posture
3. Intertextual reference, common purpose, rapport and enjoyment are identified as key aspects to engaged interaction.

# **The multimodal texture of engagement: prosodic language, gaze and posture in engaged, creative classroom interaction**

## **Abstract**

*This article explores the texture of engagement, a necessary foundation for creative thinking, and examines that texture through a multimodal lens. The article reports on research examining pupils' face-to-face interaction, achieving rigour through systematic application of a multimodal discourse analysis framework to discover more about the nature of collaboration in class. The focus in this article is the work of two boys in an exam preparation class where the task is to transpose Macbeth Act 1 scene 7 into a modern context. The multimodal micro-analysis of extracts from the interaction allows for an understanding of the work of embodied modes of gaze, posture and gesture alongside spoken and written language. In particular, it highlights the work of embodied modes in engaged collaborative classroom interaction and the poetic, or prosodic, aspects to gaze and posture as well as language in everyday classroom communication. It conceptualises engagement as a process rather than a state or reaction. Building on these insights regarding the multimodal texture of engagement in collaboration, the article argues that it is important to understand engagement as a process rather than a state or response and discusses some implications as to what teachers need to take account of when implementing collaborative activities.*

## **Key words**

**Engagement, prosody, gaze, posture, collaborative learning**

## **1. Introduction**

In the field of education the term engagement is used widely and implies different meanings in different contexts. For some engagement is seen as an indicator of student satisfaction (in different national contexts, for example, the UK National Student Satisfaction Survey, the US University of Indiana survey of student satisfaction, and the South African Survey of Student Engagement. For others, student engagement is an indicator of effective teaching (such as in the UK, the Department for Education and the inspection body for schools, the Office for Standards in Education, OFSTED ) or indicated by attendance (such as the PISA (2003) global survey of education ). This article, rather than setting out to quantify or measure engagement, arises from a telling moment in a research project investigating student-to-student interaction in the classroom. This significant moment stood out from a series of lessons because, in contrast to their prior dispositions, two students were profoundly engaged in their classroom learning. This prompted a deep probing of what exactly engagement consists of, asking the question "what is the texture of engagement?". The use of a multimodal approach to examining the data at micro-level enabled me to uncover what

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engagement *is* by examining the work of multiple modes employed by students in their face-to-face interaction as it unfolded. It is from this perspective, following rigorous investigation using a multimodal discourse analysis framework, that a thick description of engagement as a dynamic process, emerging through the employment of a range of semiotic resources, can be provided. This paper offers an original contribution to education research in its close examination of the texture of engagement and, as a result of this, in advocating consideration of engagement as a multimodal, fluid, evolving process, in contrast to more performative conceptualisations of the notion.

The aim of this article is to closely examine the work of semiotic modes in an engaged collaborative interaction in order to understand engagement better. It begins by outlining three possible conceptions of engagement and argues there is a need for research which explores engagement as a multimodal process. The study is grounded in social semiotic theory and sociolinguistics. It is positioned to regard interaction, or talk, as the communication of meaning achieved through the employment of a multimodal ensemble of semiotic resources. It draws upon the notions of interest (Kress, 2010), intertextual reference (Tannen, 2006), common purpose (Goffman, 1963), conversational inference (Gumperz, 1977) and poetry and prosody (Tannen, 2006). Following explanation of the methodology and context for research in section 3, data is presented from close multimodal micro-analysis of extracts from one instance of ethnographically contextualised classroom interaction between two pupils working on the transposition of act one, scene seven from *Macbeth*. The implications and significance of the findings are discussed in the final section.

## 2. Conceptualising Engagement

Education research concerned with engagement takes a variety differing stances. I begin by outlining two of the more dominant perspectives on engagement in education before explaining the conceptualisation of engagement as a multimodal, collaborative process. Insights from sociolinguistics, linguistic anthropology, multimodal discourse analysis and linguistic ethnography informing the understanding of engagement in interaction are then outlined.

It is possible to identify three dominant positions associated with engagement (see *Figure 1*), namely engagement as a state, as a reaction and as a process.

Concept	Engagement as a state.	Engagement as a reaction.	Engagement as a process.
Focus	Intrinsic to individual	Extrinsic to individual	Collaborative
Realisation	Comprising behavioural, emotional, cognitive components eg Trowler (2010)	Response to pedagogic strategies, materials, media, contexts Eg DfE (2014), Ofsted, Rodrigues (2007)	Co-constructed, fluid, evolving, participatory, involved, emergent.
Pedagogic Interest	Measuring learners by attainment and attendance	Measuring teachers through student attainment and attendance	Noticing engagement through interest and enjoyment in the moment.

*Figure 1: Three Conceptualisations of Engagement.*

## 2.1 Engagement as a state

In regarding engagement as a state, Trowler (2010) identifies three aspects to engagement, namely the behavioural, the emotional and the cognitive. That is to say engagement requires some form of compliant behaviour, emotional investment and is conceptualised as individual attributes. This view of engagement regards it as intrinsic to the learner and linked to psychological notions of motivation and self-belief. This conceptualisation of engagement is one that can be and is measured, through pupil attainment and attendance figures. For example, the OECD (PISA 2003) measure of engagement globally used barometers of Participation and Belonging measured through attendance. This conceptualisation of engagement positions the individual at its centre.

## 2.2 Engagement as a response

In the second conceptualisation, there is a shift from concern with the individual state of engagement to concern with factors which impact upon or provoke a response from the

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individual. From this focus on extrinsic factors, engagement is largely viewed as arising from pedagogic strategies. That is to say, engagement is a reaction or a response to external foci such as teacher stimulation. The focus shifts to teacher activity and learning becomes subordinated to teaching. In this way teacher effectiveness and teaching quality can be measured through learner attainment. In UK policy documents, for example, the science curriculum, the understanding of engagement is from a teacher input perspective: ‘teachers will wish to use different contexts to maximise their pupils’ engagement with and motivation to study science’ (DfE 2014: no page). Furthermore, engagement is a concern of inspection of teaching and learning in the UK by Ofsted (2015:36, 45, 64)

Engagement can be understood as a response to pedagogical strategies or to materials, or as in Rodrigues (2007) research, as a response to visual and auditory multimedia without a focus on measurement of teacher performance. Researchers concerned with engagement in classroom activity have examined it in relation to cultural practices (Glaveanu, 2013), in terms of creativity resulting from engagement with natural environments (Jones, 2013) and as active engagement as a requirement of deep learning (Halpern et al , 2012). In 2003, Grainger warned of the narrowing of learning experiences ‘so that emotional engagement, full participation, experiential and inquiry-based learning, as well as spontaneity and creativity, have been pushed to the margins’ (Grainger, 2003:2).

Thus far, I have described two conceptualisations of engagement as a State or as a Response (figure 1). It can be seen that these two conceptualisations of engagement can sit with discourses of accountability and performativity. It is important to note at this point that the distinctions between the three positions on engagement are made in this article on the understanding that engagement may be conceptualised in other ways or a combination of these aspects. For example in applying flow theory, “a state of deep absorption in an activity that is intrinsically enjoyable” (2003:159), Shernoff et al (2003) focus on attention, interest and enjoyment, *and* relate engagement to styles of pedagogic practice *and* learner autonomy and perceived control (2003:158). They also relate engagement to individual factors such as gender, age and educational experiences (2003:159). In this way they position engagement as a combination of intrinsic and extrinsic factors.



### 2.3 Engagement as a process

Engagement in this article is understood as a Multimodal Process, requiring collaboration, interest and participation in activity within a context. Rather than intrinsic or extrinsic to the learner, this is seen as collaborative and situated in shared negotiated space between, in and around learners. In other words, the participation takes the form of each pupil's collaboration with the other in the co-construction of a text. (This article is not investigating solitary engagement.) The affective reactions of enjoyment and interest are at the heart of the conceptualisation of engagement here. The research project examined pupil-to-pupil interaction, and engagement has been understood as active, rather than a passive view of being interested in/by something. Here engagement is an active process, emotionally-driven and involving the sharing of prior knowledge. Rodrigues (2007:17) highlights prior knowledge in science activities as important to pupil perceptions of engagement. It includes the attention invested in an interaction, both in terms of attention of participants to each other and attention to the activity, the content or subject matter: in Hallidayan (1976) terms the Interpersonal and Ideational aspects to the interaction. Engagement in interaction is a two-way or reciprocal relationship. We are unlikely to invest attention in someone, or something, which does not 'grab' our interest. In terms of participants' relationships, the more attention is paid to the participant, the more this is reciprocated. In other words it is difficult to 'engage' with an unwilling partner. Engagement requires some level of enjoyment. It comes from within the pupil's interaction with an other. Engagement as a discursive process also involves interest, common purpose, inference and prosody, each of which is presented below.

### 2.2 Perspectives on Engagement in Interaction.

In examining literature regarding engagement in interaction I first turn my attention to the connections between interest and intertextual reference. The interests of the pupil need to be served by an interaction. The engaging effects of popular culture on young children are discussed in Marsh et al (2005) where 'allowing children to bring popular culture from their home experience to the site of the classroom can have an electrifying effect on children and orient them to schooled practices' (2005:68) and Vass's examination of collaborative writing processes found 'emotion-driven thinking....inspired and channelled the creative flow of ideas' and 'musing, acting out,

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humour and singing were discursive features with emotive content which supported content generation' (Vass, 2007:96). Maybin notes the way that intertextual reference in children's interaction is apparently 'automatic' and 'the cognitive processing involved must happen at a relatively unconscious level' (2006:157/8). From a Bakhtinian (1986) perspective on language, our talk is filled with others' words and each text is a re-working of what has gone before. It is impossible to say something utterly new as each word is imbued with resonances of meaning from prior use. Intertextual reference is an obvious manifestation of that process and is intrinsic to all our interactions. Pupils' agency in choosing what to reference in their interaction is fundamental to their understanding and construction of text. From this it can be argued that engagement and enjoyment require freedom, to reference that which seems most appropriate/important in the moment, and agency, in being able to choose how an interaction is constructed.

There is also the element of common purpose within engagement. Goffman (1963) referred to focussed interaction, where two or more people attend to a common purpose through interaction, which could be a conversation, game playing or playing music together or dancing. Focussed interaction takes place within a frame, that is a set of social/cultural conventions or rules. The interaction here is framed by the school practices, GCSE English Literature Curriculum as interpreted by the teacher and the wider social context of the geographical location of the school.

Engagement in interaction is not simply about the here and now, or being in the moment. It also requires participants' consideration of what is to come, or the potential direction any given interaction may take (Gumperz, 1977 in 1999). Gumperz refers to Conversational Inference, the way in which 'participants in a conversation assess others' intents and on which they base their responses' (1999: 98). In order to infer, it goes without saying that participants need grammatical/linguistic knowledge. They also require knowledge of the physical setting, personal background knowledge, understanding of each others' attitudes, sociocultural assumptions and knowledge of conventions regarding role and status and social values associated with the message being relayed (Gumperz, 1999:98).

In addition to these multiple layers, the participants need to be able to decode the prosodic cues of speech in order to infer whether or new, surprising or contrasting information is given through tone or stressed words or syllables, or tune. Prosody is

about the music of speech (Wennerstrom, 2001). It is about rhythm, or beats and pace, and cadence, or the rising and falling voice quality and is closely related to conceptualisations of poetry.

The notion of poetry in spoken interaction is explored in Tannen's (1989, 2007) work examining the way in which features often considered literary, such as repetition, imagery, rhythm and metaphor, pervade everyday discourse. Tannen is concerned with involvement in discourse and the way that rhythmic synchrony, patterns and repetition are key involvement strategies (2007:32). Each of these aspects can be considered 'prosodic'. Carter (2004) also expounded the creativity of everyday talk and demonstrated the interplay between context and interaction type and the way in which creative aspects to language were more prolific in intimate settings than transactional or professional settings (2004:165). The work of prosody in classroom language has been investigated by Skidmore and Murakami (2010) who propose that attention to prosodic cues in classroom interaction may develop teacher sensitivity to enquiring tones of exploratory talk and 'encourage more thoughtful and considered contributions from students' (2010:21).

To be clear, it is not the 'spoken language' that is of sole interest here as Kress et al (2006) have already demonstrated the employment of multiple semiotic resources in the multimodal communication in the English classroom. The focus of the analysis in this research is upon multiple modes employed in interaction and not focussed upon spoken language in isolation. Engagement and prosody are considered as they relate to posture as well as language and this is elaborated on in the discussion of data section of this article. Gumperz (1977 in 1999), acknowledges inference cues may be verbal or non-verbal. In sum, engagement is an aspect of interaction, which requires attention, (common) purpose and inference. Furthermore, it can be at least partially understood through an examination of prosodic cues, which may be manifest through the mode of spoken language or posture or gesture, or gaze.

Engagement does not present solely through language but through the way we gaze at one another or shift our postures. The importance of posture as a means of establishing rapport or convergence of ideas has been noted in the work of Schefflen (1964), Beattie and Beattie (1981) and La France (1985). The work of gaze in turn-taking and its control function in interaction has been examined by Kendon (1967) and Sidnell's work

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(2006) illuminates our understanding of the role of middle distance gaze when we are deep in thought in a moment in interaction.

In sum, engagement as a multimodal process is shown in this article to comprise interest, inference, common purpose, poetry and prosody, rapport and empathy, and enjoyment. Each of the aspects to engagement in interaction outlined above are explained in more detail alongside examples from the data in section 4:3.

### 3. Methodology

In this article I am using multimodal discourse analysis of ethnographically contextualised instantiations of classroom interaction (figure 2) to explore the texture of engagement. In order to uncover the ways in which meaning is made through multiple modes, or put another way, the ways in which the ideas are constructed through language, gaze and posture, a framework for analysis of video-recorded data is used which is based upon Halliday's (1994) metafunctions (Interpersonal, Ideational and Textual). This research endeavours to make the *familiar* exchanges of pupil-to-pupil discourse *strange*, through the use of the multimodal analytic tool which focuses on contextually understood micro-instantiations of classroom interaction. This involves a multimodal transcription grid, which includes gaze, gesture, posture and spoken language, and a microanalysis of the work of cohesive devices in the Textual metafunction. This is understood through the ethnographic contextual data generated through observation and focus group interviews in conjunction with a longstanding relationship with the school and community. This project builds upon previous multimodal research into pupil-to-pupil classroom communication (Author, 2006, 2012, 2014) in addition to studies of pupil talk (Maybin, 2006), classroom interaction and the construction of knowledge (Barnes and Todd, 1995, Mercer, 2000, Wegerif et al, 1999, Wegerif, 1997) and multimodal studies of communication in the English classroom (Kress et al 2006). The focus for analysis here is one telling case which has emerged from data generated for a wider project examining students' face-to-face interaction in lessons.

### 3.1 Research Context

This research has been conducted in a newly built Community School for pupils aged 11-18 on the edge of a post-industrial city in the North of England. During the data generation period from September to December 2013 many of the staff in the school felt under pressure and were generally anxious about an impending inspection visit later in the term. This research project is not investigating assessment results or learning progress as defined by Ofsted. The position the school was in, however, and the impact upon teachers and pupils were factors I needed to take into consideration when examining the data and providing feedback to the school.

### 3.2 Research participants.

The twelve pupils involved in this project were not randomly selected, nor could they be termed a purposive sample. The pupils were pre-selected by happenstance. I first worked with a class of Year 2 pupils (aged 6-7) (Author, 2006) and then in Year 5 (aged 9-10) (Author, 2012, 2014) using multimodal analysis to analyse pupil-to-pupil classroom interaction. I intended to return to as many of the same pupils as possible to examine their classroom discourse in year 11 (aged 15-16). From the original cohort twelve pupils all gave full consent to be part of the project, as did their parents and carers. The focus in this article is the interaction of two boys aged 16 working together in an exam preparation English Literature lesson on Macbeth. This lesson was taken from a corpus of 19 video recorded interactions taken from 41 lessons observed during a 3 month period in 2013. The lessons observed included Maths (2) English (13), Science (6), Sociology (7), History (3), Religious Education (1), PHSE (Personal, Health and Social Education) (7) and Engineering (2). The sample was opportunistic in that it resulted from the logistics of following 12 participants across a range of subjects and classrooms in a large secondary 11-18 comprehensive.

### 3.3 Multimodal Discourse Analysis

A multimodal perspective on discourse simply means looking at the many and various modes of communication that we use rather than focussing on one dominant mode such as language. It incorporates consideration of design, space and environment, non-verbal embodied modes and graphic modes. Social semiotic theory on communication and the

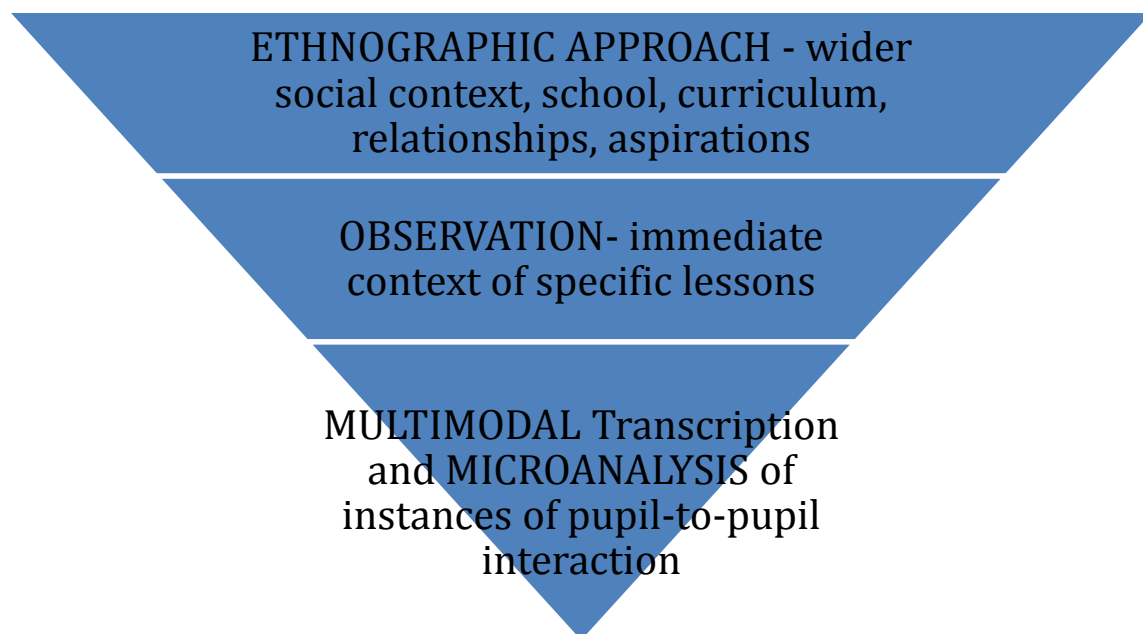
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emergence of multimodal analysis as a tool for investigating communication evolved from socio-linguistic perspectives on the situated nature of language (Halliday, 1985). This study draws upon three perspectives: multimodal interactional analysis (Norris, 2004) informs its interest in spontaneous interaction; the systemic functional perspective of multimodal discourse analysis (O'Halloran, 2004) is incorporated in the design of the framework for analysis which focuses on the Ideational, Interpersonal and Textual aspects to interaction and the social semiotic theory of communication as described by Kress (2010) informs this study with its interest in the motivated sign and social context. The theoretical basis for the approach to multimodal analysis in this study, then, lies with Functional views of grammar and language (Halliday, 1976, 1994) and draws upon a social semiotic theory of communication (Kress, 2010).

I explain in section 4.2 the process of transcription and the micro-analysis through the cohesive devices which realise the Textual metafunction.



*Figure 2: The research design.*

### 3.4 An Ethnographic Approach

In terms of the ethnographic contextualisation of the interaction discussed here, I was positioned as an insider in that the school was familiar to me as my children had

attended and I had formally been a school governor of the previous school on this site. I was also an insider in that I had a history of research with the pupil participants in the study from previous research project when they were aged 6 and 10 at their feeder primary school. I spent several days a week over a period of 4 months observing and filming at the school. I would not claim to be an insider to the lives and relationships of the participants although I built up some understanding of their feelings about school and future aspirations through informal lunchtime meetings and group interviews. The school context is discussed further below. During the research period I behaved in the classroom as an extra support to the teacher at times and note taker where that was possible. Pupils in the classroom occasionally sought advice and discussed their work with me and, as a former secondary school teacher, my presence was positioned as classroom helper and researcher.

The rationale for using this methodological approach is to uncover the ways children are making meaning in the moment-by-moment exchanges in classroom communication in order to understand better the multiply-layered texture of engagement through close examination of one interaction. It acknowledges that meaning is always made in context and that the ethnographic detail can aid the research process in framing the interaction.

In the following sections I contextualize the interaction under analysis through an ethnographic narrative account of the events leading up to the interaction in order to contextualize what took place between the two boys, before presenting the method for the analysis of discourse and the findings.

#### **4, Analysis and Findings**

I begin with a rationale for the selection of this interaction and a narrative ethnographic account of the events leading up to the instance of engaged interaction. I then present findings from the multimodal analysis of the interaction.

##### **4.1 The hate-love-hate relationship with Shakespeare.**

This particular interaction was chosen because the boys displayed a shift in attitude from the previous English lesson in the morning of the same day. The previous lesson that morning was based on exam practice questions exploring Macbeth's soliloquy in

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Act 1 Scene 7 and peer review of written work. The aims of the lesson written on the whiteboard were:

*By the end of this lesson you will have explored and have alternative interpretations on Macbeth's soliloquy - his Inner debate*

*You will have produced 200 words in 20 minutes on the following question 'what is the purpose of the soliloquy at this point in the play?'*

The morning lesson had been typical of the lessons observed with this cohort during the research period in this school across all subjects (with the exception of PHSE) in that there was a dominant focus in all lessons on exam practice, revision of core facts and concepts, and techniques for recognizing and raising the level of the one's work.

Midway through the morning lesson I noted *'O tells me he doesn't like English – or Shakespeare'* and later, in response to the negative postures, lack of discussion or in fact interaction of any kind,

*'This is actually painful'. 'Despite having the freedom to discuss their written work, a freedom which four girls sitting behind are reveling in with animated talk including singing, the two boys are not engaged'.*

*Research Journal notes 28/11/2013*



*Figure 3: Not engaged.*



As an example of the posture and gaze of the two boys in the morning lesson where they were largely 'not engaged', figure 3 is included to illustrate the difference which can be seen in comparison with figures 4, 5 and 6 from the afternoon lesson. O spent much time looking out of the window or with his head on the desk. Neither boy spoke very much. They rarely looked at each other.

With ten minutes of the lesson to go the teacher went to talk to them and then for the last few minutes, working on reviewing peer writing, the boys seemed to be talking more. But looking at a peer's work J comments despondently *'I'm not going to end up writing like this'*, revealing a lack of confidence as well as lack of enjoyment and involvement.

At the beginning of the afternoon lesson (from 1.20pm to 3.05pm) the teacher told the students they were going to watch two different film versions of the same scene, Act 1 Scene 7 and then the students were going to write their own modern version of what was happening between Macbeth and Lady Macbeth after Macbeth's soliloquy. The students were generally engaged with this. They asked if they could write in 'Chav speak' and they asked for 'the Ian McKellan version' as they liked him 'because he's in Lord of the Rings'. After viewing, the pupils worked in pairs or small groups of three or four, and O and J worked as a pair together. At the beginning, having been so concerned with their lack of interest in the morning, I tried to engage them in conversation about how they might do their modern version. J liked a gang scenario idea and they said they had seen Luhrman's Romeo and Juliet and liked it, so I retreated as it was clear to me they had ideas of their own. For the next 31 minutes the video recorder took account of the boys' interaction and this became the data put under a multimodal lens. I worked with other members of the class whilst watching from a distance. At 2.37pm (15 minutes into the interaction) I noted

*'Some of the pupils have transcribed just one line of Shakespeare and one line of modern English. The girls' group (behind J and O) are also struggling with it...BUT the boys I was so worried about this morning, who hated English and Shakespeare in particular, have engaged with this task. They have achieved more in the amount of text they have written, are focused, interested, they are working as a team'*  
Research Journal Notes 28/11/13.

O and J chose gay tennis players, Stuart and Glen, as Macbeth and Lady Macbeth, for their genre transposition and gave their characters American accents. The King became the tennis coach, Enrique, whom they dispatched with drugs and a beating with tennis

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racquets. At the end of the class they read their dialogue to the teacher. She asked them to read aloud for the class but they declined so the teacher and another pupil read aloud and the boys received a spontaneous round of applause from their peers for their efforts.

Thus far I have given a contextual narrative of what took place in this lesson and the reason for focusing on this particular stretch of discourse to see what engaged collaboration looks like through the use of a multimodal analysis framework. The purpose of this close analysis is to minutely examine the ways in which the thoughts of the boys were communicated to each other through spoken language, gaze, posture gesture, proxemics and haptics.

#### 4.2 Process of transcription and analysis.

Firstly after several viewings, a rough transcription of the interaction (of 31 minutes from 2.24pm-2.55pm) was made including spoken language and obvious use of other embodied modes. From this a detailed multimodal transcription of three selected extracts of 1-3 minutes was made. This used turns of the counter, roughly one second, to delineate the transcription.

- Extract 1 (2.24-2.26pm) - **Franklin and Lamar**. (counter 09.00-10.09)
- Extract 2 (2.38-2.41pm) - **You can't go back on it now**. (counter 23.46- 25.37)
- Extract 3 (2.50-2.53pm) - **Who dares receive it other?** (counter 35.49- 38.43)

These transcriptions were then analysed through the textual metafunction (Halliday, 1975) using the operation of cohesive devices of Repetition, Reference, Substitution and Omission, Conjunction, Metaphor, Idiom and Intertextual Reference. The ideational and interpersonal metafunctions were analysed using the turn-by-turn functions of checking, instructing, explaining, evaluating, speculating, imagining, and the wider social context of school, curriculum, relationships, and aspirations.

#### 4.3 Key aspects to engagement in face-to-face construction of text

From the multimodal analysis of the interaction through each of the metafunctions, I identified four key aspects to the discourse between two 16 year old boys, referred to here as O and J. Each of these, I suggest, highlights a dimension to the texture of engagement.

- Interest, metaphor and intertextual reference

- Extension: going beyond the task set
- Realization of common purpose, rapport and empathy
- Enjoyment and appreciation.

#### 4.3.1. Interest, metaphor and intertextual reference

The interest of the pupils is indicated through the ways in which they invoke their own social worlds through metaphor and intertextual reference. The term metaphor here is used to mean broadly speaking of one thing in terms of something else (such as *football as war*) and intertextual reference is used, following a Bakhtinian (1981) understanding of discourse, to define the appropriation of meaning from one text to make meaning in another. Metaphors are often considered a literary feature of language (Carter, 2004) where in fact Tannen (2007:32) identifies them as one of a number of involvement strategies that work on meaning in spoken discourse including indirectness, ellipsis, tropes, dialogue, imagery and narrative. Tannen (2007:38) believes ‘Most meaning is communicated in daily language not by the logical processes of induction and deduction but by abduction’. That is to say in order to understand something new or unfamiliar we may turn (laterally) to something we understand to be similar. This use of metaphor and intertextual referencing can be accomplished through any mode in face-to-face interaction including posture and gesture (Author, 2012).

The importance of attending to intertextuality in education discourses has been highlighted by Short (2004) and Maybin (2006). Short argues that:

Researching intertextuality within collaborative learning environments will open up a broader range of connections and meaning making among learners and allow researchers to understand more about student learning and effective learning environments.

Short 2004; 373.

Here then metaphor and intertextuality are discussed in terms of their role in learning rather than as linguistic features.

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*Fig 4: Franklin and Lamar (Benzies and Sarwar, 2013)*

In this first example O and J discuss having Franklin and Lamar, two petty criminals from the video game, Grand Theft Auto 5, (Benzies and Sarwar, 2013) as their main protagonists, in place of Macbeth and Lady Macbeth. This is an example of the boys bringing familiar characters from their out of school social worlds into their classroom discourse. Maybin (2012:385) discusses the way indexicality, the references made to specific times, places or people, can be performative.

Indexicality has also been used in a broader sense by linguistic anthropologists to refer to how particular kinds of language use invoke complex social identities, or past or present experiences  
Maybin :2012;385.

By invoking the characters of the criminal personas of Franklin and Lamar, O and J are indexing their acknowledgement of the violent crime being contemplated by Macbeth and Lady Macbeth. However while the idea amuses them they are also uncertain of the ‘school’ reception of their idea as O’s uncertain ‘so are we really going with Lamar?’ (Line 09.12) demonstrates. He goes on  
‘It’s just Lamar’s a bit rude, man. Franklin’s a bit of a bad boy” (lines 09.14-09.17).

*Table 1 Franklin and Lamar*

Turn/counter	Gaze	Gesture/ hands	Posture/ body	Speech
09.12	J looks down (half smile)	O right hand on exercise book ,	O head turned to J, O nods	O so are we really going

	O looks at J	turning pages, J left hand turning pages		with Lamar?
09.13	O looks at J , J looks O		O head flick up, smiling, leans back slightly	
09.14	J laughs, O laughs	J turns page, O left hand still curled around top of book and right hand flicking pages		O it's just Lamar's
09.15	J looks down at book, O glances up at camera		Both boys smiling	O ..a bit rude man
09.16	J looks down at page, O looks at J	J turns page		O Franklin's...
09. 17	J looks down, o looks at J		O nods, O smiles, J smiles, O shifts up in seat	O ..a bit of a bad boy

They seem to be concerned here that their suggestion may be too strong for the task they are engaged in. As a result this idea is jettisoned in favour of two gay tennis players who plot to murder their coach. Nevertheless, the American accents and syntax remain. For example J's '*We're not doing this no more*' (21.38) and J's '*I'm gonna raquet you to death*' (39.07). This is an example of voice appropriation (Maybin 2006:158). That is, by invoking the voice of another, from another situation, O and J bring their evaluation of the characters of Franklin and Lamar and of Macbeth and Lady Macbeth into the interaction. Both pupils are cementing their shared enjoyment of the game Grand Theft Auto and additionally they are bringing the characteristics of the two 'bad boys' from the game into their transposed dialogue. Whilst the names of the characters and their identities do not make the final version of their written script, the characters of the two gay tennis players are imbued with their accents and attitude and these are part of the written and oral draft. Vass (2007) investigated the role of emotion in thought processes associated with creative writing and the role of close relationships in mediating shared creativity. She points out that frequently activities thought of as 'off-task' such as musing, acting out, humour or singing can enhance collaborative creativity

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(Vass 2007:115). The use of intertextual references, to cultural associations familiar to pupils, can be added to this selection of activities.

#### 4.3.2. Extension: Going beyond the task set

There is a point in the discourse where the interactive turns are in rapid succession and extend beyond the remit of the task set. The boys evaluate their work spontaneously and consider the implications of their scene for wider plot scenarios covering the whole play. The boys are engrossed in their ideas and only twice in 31 minutes does the attention focus elsewhere. Csikszentmihalyi (1996) describes the concept of Flow where with attention focussed on a specific task, engagement and absorption in that activity and use of a skill, a state of happiness can be achieved: the reward for endeavour is the feeling of being engrossed or 'in the groove' with a task. The activity here could be described as an example of flow. However, what is interesting here is that the engagement is not a single state or realised within a single moment but is construed through a series of shifting, emerging, evolving moments connected through the boys' participation with each other.

In addition to the pace and focus of the interaction, there is also a depth achieved through multi-layering of voices. Virtually all utterances are polyphonic or multiply voiced, because from a Bakhtinian (1981) perspective they are infused with the words of other people bringing meaning to the discourse. In this interaction there is contemporaneous articulation of multiple voices through the examples of the American syntax and accents of the protagonists, tennis players Stuart and Glen, the deep actorly voice when reading the Shakespeare text from their books and the boys' own regional dialect and accent. Furthermore when the boys read their final transposed dialogue to the teacher there is no sign of the American accents and they have returned to their 'school' voice. Maybin (2012:387) writes of a 'schooled voice' as being part of the genre of education discourses with examples such as the metalanguage associated with assessment and the register of classroom dialogue.

*Table 2 Multiple Voices*

Turn/counter	Gaze	Gesture	Posture	Speech
37.39	J turns and looks at O, O looks	J right forearm on desk, pen	O leans back and upright, J head	O So it's basically like

	down	poised in hand	turned to O	
37.40	J looks at O	O puts right forearm on desk	O shifts up in seat and leans forward, eyebrows raised	O we ...we are
37.41	J looks at mid dist., O looks at own book	O puts hands together holding pen, J right hand on desk with pen	O leans forward	J (deep dramatic voice) I really want ..O Yeah...
37.42	J looks at mid dist, O looks at J		O head turned to J	J to boil him at the <i>tourson</i> (indistinct)
37.43	J smiling, turns to left to look at O, O looks left mid dist.	O moves right arm back, holding corner of book	Both boys turn to left , O leans back slightly	O yeah
37.44	J looks at O smiling, O looks down at desk		O turns to right towards J, J turned to O	O And without, like, you
37.45	J and O lock gaze		J and O heads turned to each other	O we were friends wi'him
37.46	O looks down mid. Dist. , J looks at O.		O nods down	O And we were close wi'him
37.47	O looks down at own writing. J looks at O's writing smiling		O nods down twice	
37.48	O looks at own writing, J looks at text book to right, smiling	O writing	O leans back, J turns away to right	
37.49	J looking down at own writing, O looking down at own writing	J writing	Both boys upright posture, leaning slightly in to books	J Like (deep dramatic voice ) who will suspect us?
37.50	O and J gaze at own writing	O and J writing	J leans in to writing, head goes down	O yeah

As the boys move between their own writing, the Shakespeare text book and voicing their own version and their commentary on it, they selectively read aloud from the original Shakespeare script in their text books, and in doing so they invoke actorly voices deeper in tone than their normal speaking voice. J *'Who will suspect us?'*(37.14) The boys also use their own regional dialect for evaluating their work as they progress with the transposed dialogue. O uses the local dialectal pronunciation 'wi'him' for 'with him'. (37.46) Towards the end of writing J says J *'we've got this in the bag. Aye, it's a good*

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story'. (40.13) and J 'As a full story it would be reight nice' (40.56) using dialect words 'Aye' for 'yes' and 'reight' for 'right' or 'very' in Standard English.

#### 4.3.3. Common Purpose, Prosody, Rapport and Empathy

The third aspect to engaged interaction to emerge from this data is common purpose manifested through all modes. Common purpose manifests itself in the boys' interaction through repeated patterns and prosody in language, through repetition and patterns in gaze, through repeated patterns and repetition of posture and through proxemics, the physical closeness and synchronic, aligned postural shifts. It is important to note that these are just snapshots from a whole text punctuated with a flow of postural alignments and shifts, repeated words and actions, and repeated locked gaze.

Firstly, linguistic realisation of common purpose is seen through repeated verbal patterns and prosodic features. The prosodic vocal punctuation of O's 'Lamar....and Franklin' mirrors J's 'Lady Macbeth...and Macbeth'. (Table 3, 10.06/07). The poetry of it entertains O and J and they laugh.

*Table 3 Prosodic Repetition*

Turn/counter 1 second	Gaze	Gesture/ hands	Posture/ body	Speech
10.05	O looks down at own writing, J looks at book	J right hand points at book then in fist shape, left hand with pen pointing up.		<b><i>J lady Macbeth</i></b>
10.06	O looking down at pen, J looks at O	O both hands on pen		<b><i>J and Macbeth</i></b>
10.07	O and J lock gaze		O and J both smiling	<b><i>O Lamar and Franklin</i></b>
10.08	J looks at mid dist, O looks at pen in hands		O nods smiling, J smiles	O and J laugh

Embodied realisation of common purpose is achieved through mirrored or repeated posture and gaze. Firstly, mirrored postures and postural alignment and convergence are noticed in the work of Schefflen (1964) and Beattie and Beattie (1981) as a means of



establishing rapport or convergence of ideas. I use the term 'mirrored posture' to refer to the diachronic (sequential as opposed to contemporaneous) repetition of a posture. Postural alignment is where the postures are aligned synchronically (at the same time) and postural convergence is where the bodies lean towards each other synchronically (table 4). I use the term Prosodic postures where the interactive sequence is punctuated by a series of rhythmically repeated postural shifts.

*Table 4: Synchronic and Diachronic Gaze and Posture*

Time	Mode	Movement
Diachronic	Mirrored gaze	one person's gaze direction is repeated by another as an indicator of the focus of attention or an act of solidarity or empathy
Synchronic	Locked gaze	Two participants hold their gaze directly at each other's eyes as they speak - this may be fleeting or momentary or for several seconds
Synchronic	Aligned gaze	Both participants look at the same thing at the same time
Synchronic	Postural alignment	Both participants leaning in the same direction at the same time
Synchronic	Postural convergence	Both participants lean towards each other at the same time
Diachronic	Mirrored posture	A sequential repeated posture which can be an act of approval or empathy
Diachronic	Prosodic posture	A series of repeated postures

La France (1985) noted that there is greater mirroring when participants are co-acting or cooperatively working. Furthermore. Mirroring indicates the *degree* of involvement, that is to say 'more is more', and that congruent postures indicate rapport or relatedness. In this interaction the attention shifts from their heads down, leaning over desks, writing in books, to leaning back or shifting up slightly, gaze at books but postures aligned, to locked gaze and bodies turned towards each other cementing their collaboration and showing empathy (Fig. 5).

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*Fig 5: Postural alignment: both hands in front of bodies handling pens.*

#### Gaze and locked gaze

Gaze as a mode of meaning making can have a control function and it plays a part in turn taking (Kendon 1967) where there is an increase in 'looking' towards the end of a turn. An increase in looking can also signify liking. Gaze can be arbitrary or convey meaning (Norris 2004) It can be a glance or a sweep or fixed on one point, or another's eyes, and, in fact, the withholding of gaze can convey 'I'm not paying you attention'. Gaze can be random or purposeful. In this instantiation the boys' gaze moves between the text books, out of the window momentarily, at the girls behind and other members of the class but mostly it is at their own writing and at each other. The locked gaze refers to moments where the boys' eyes meet and they hold the gaze for a moment. This is different to a sweep across someone's face, which may or may not make eye contact. Here locked gaze is repeated throughout the interaction and is a way of cementing the shared enterprise (Fig 6).



Fig 6: Locked gaze and mirrored posture with pen in hands

In addition to locked gaze, is middle distance gaze used for thinking and also for recounts of narratives (Sidnell, 2006). This is where, deep in thought, our eyes avert from a subject and, to use literary language, glaze over. As J goes into character beginning ‘who dares receive it other?’ (In a deep actorly voice), his gaze goes to the middle distance as he is deep in thought. O moves his head slightly away and down to his left and he too looks briefly at the middle distance in a moment of solidarity with his partner before turning his head to the right orienting himself to J and asking ‘How’s Enrique make it? Who will dare believe anything...I will....we shall cry out’. For a brief second O had looked where J looked, into space, into middle distance, deep in thought, perhaps gaining inspiration from his partner’s own gaze into middle distance. It seems the urge to repeat words, postures and gestures is also manifest with gaze. In discussing prosody in classroom language, Skidmore and Murakami (2010:21) note that prosodic orientation, that is the acknowledgement of another speakers’ use of prosody in the construction of a response, is an important means

by which speakers gauge how far they have reached a shared understanding of the topic in hand , and is often used to signal the kind of emotional commitment that speakers feel towards the interaction-in-progress (how interested, excited, bored or confused they feel in the course of the unfolding interaction).

Skidmore and Murakami 2010:21

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This fleeting repetition by O of middle distance gaze seems to indicate a shared understanding and emotional commitment to the interaction at a deep level. Mirroring is discussed in anthropology literature as a means of indicating involvement in group activity (La France, 1985). The sharing of information in any interaction requires a degree of empathy and convergence in any mode. In order for the co-construction of this text to take place there needs to be mutuality, rapport, empathy and shared evaluation. It is demonstrated here how that is achieved through the modes of posture and gaze as well as language.

#### 4.3.4. Enjoyment and appreciation

The pupils' evaluation of their work in this lesson is positive (see spoken examples above) and the degree to which they demonstrate enjoyment through their postures and gaze, as well as smiling and laughing frequently during the interaction, coheres with a picture of engaged, socially interactive work. To add to the pupils' own appreciation of their creative work we can add the approval of the teacher who listened as they read out their finished written script and then with another pupil performed this script for other members of the class. The performance of their work, though not by them, confers status and respect on their finished text. The spontaneous applause from peers cemented what had been a very positive learning experience for these pupils. In figure 7, O and J are smiling at the applause given by their peers and J, in fact, is also clapping, a sign of the togetherness felt with peers at this moment in the lesson. At the end of the lesson they were upbeat, their postures tall, smiling - at each other, at me, at the teacher, at other pupils -, and relaxed. They were transformed from boys who hate Shakespeare (their words) to happy fulfilled pupils at the end of this lesson. Radford (2008: 225) states that "learning is both a process of knowing and a process of becoming" and in this lesson the boys became Shakespearean actors, became script-writers and became murderous tennis players.



*Fig 7: Appreciation.*

## **5. Discussion and Implications**

### **5.1 Summary and Implications**

The contribution of this article lies with the challenge to discourses which regard engagement as an indicator of ‘successful pedagogy’, a reaction to pedagogic materials or strategies, or an indicator of pupil/student compliance. It proposes a thick description of the evolving texture of engagement as a process, through multimodal analysis of an instance of collaborative interaction.

The micro-analysis of this interaction illuminates the complex and intertwined layering of semiotic resources in the texture of the pupils’ face-to-face interaction. It also shows how engagement can be realised through the operation not only of spoken language, but also a range of embodied modes. In this discussion the use of the term ‘text’ denotes the collaborative communicative process through which a final end product of a written text is produced: it does not denote simply the end product. The ‘togetherness’ required of the collaborative work involved in the construction of this text is revealed to operate powerfully through modes of gesture, posture and gaze. The close analysis of the interaction afforded a description of the texture of engagement. From this, examples from the data have shown how aspects such as use of metaphor and intertextual

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reference, multiple-voicing, prosodic posture and gaze and enjoyment all play a part in the construction of engagement in this instance. It is recognised that this is a description based on close analysis of one instance and that further research is needed to examine other dimensions of the texture of engagement and how this plays out in other contexts. There are implications here for how teachers use this information in their classroom organisation of physical spaces and their management of classroom social practices. For example, as a starting point teachers may wish to consider the positioning of pupils working closely together so that they may take account of gaze, that is sitting opposite or with chairs facing. Vass (2007) investigated the role of emotion in thought processes associated with creative writing and the role of close relationships in mediating shared creativity. The closeness between the boys in this interaction is postural, cultural, linguistic, historical and linked to their motivation. As seen from the earlier morning lesson however, motivation alone will not necessarily lead to engagement. Building rapport between partners for pairwork activities needs to be a concern of any teacher wishing to encourage pair/ group discussion. Furthermore, teachers need to embrace the intertextual references and multiple voices pupils invoke in their creative work. The enjoyment displayed by the pupils in this interaction is key to their engagement and it is part of an interdependent relationship: engagement and enjoyment both seem to require the presence of the other. The sense of belonging seen to be a measure of engagement globally (PISA, 2003) is enacted through the boys' introduction of references to popular culture from their own world into their school world. The boys invested in the interaction because of mutually understood references (to the 'gangsta' worlds of Lührman's *Romeo and Juliet* and of *Franklin and Lamar*) which engaged their interest. The references are intrinsic to their world and become part of a school text, which they had ownership of. These references amuse them and challenge them. They invested much effort in working out the full implications of their story for the plot of *Macbeth* as a whole, something not required by the task set. Their shared interests and cultural knowledge allow the conversational inference required for successful interaction (Gumperz, 1999). The combination of conversational inference, intertextual reference and shared cultural interests / knowledge contribute to the level of engagement, rapport and mutuality manifest in the poetic or prosodic language, posture and gaze involved in constructing the text.

## 5.2 Conclusions

The suggestion that involvement in interaction is achieved through strategies such as repetition, patterning, metaphor and prosody is not new (Tannen, 1989, 2007); nor is the importance of intertextual referencing (Maybin 2006) or popular culture (Marsh et al 2005). Each of these propositions comes from a linguistic position. The multimodal analysis of engaged interaction has, however, illuminated the ways in which the texture of engagement can be regarded as constituted through language, posture and gaze: that the poetry and prosody of our language in engaged interaction can be matched by the poetry and prosody of our gaze and postures. Carter's observation that the most creative spoken language arises in casual or informal interaction (2004:165) may also be applied to the most poetic, prosodic multimodal interaction. The freedom to 'get involved' at a deeper level with text co-production and to become engaged collaborators seems to require conditions which allow temporal and cognitive space for that which might be considered 'off task', and for the exchange of ideas through a look, a glance, a shift in posture, a flick of the hand or a smile. This article shows that aspects to communication that could be regarded as lacking significance need to be taken account of when considering engagement in interaction, as this analysis has shown their intrinsic value in the mutuality and rapport in this instance of engaged, co-construction of text in the classroom.

Finally, if we accept that engagement is not something which can be measured by monitoring attendance records, is not something which can be 'counted' in fact, but is an evolving, fluid, poetic, emotion-driven process embedded in the texture of our social worlds, then we can understand better how to facilitate this in our classrooms.

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## References

- Author, (2006) 'Actions speak as loud as words: a multimodal analysis of boys' talk in the classroom'. *English in Education* 40/3. pp 66-82
- Author, (2012) Messing about with metaphor: multimodal aspects to children's creative meaning making. *Literacy* . Ukla Blackwell. 46/3 pp156-166.
- Author, (2014) Meaning between, in and around words, gestures and postures: multimodal meaning-making in children's classroom discourse. *Language and Education* 28/5 pp40-420.
- Bakhtin, M. (1981) *The Dialogic Imagination*. Austin, Texas: University of Texas Press.
- Barnes, D. and Todd, F. (1995) *Communication and Learning Revisited: Making Meaning Through Talk*. Portsmouth: N.H: Boynton/Cook Publishers: Heinemann.
- Beattie, G. and Beattie, C. (1981) 'Postural Congruence in a Naturalistic Setting' *Semiotica*, 39/pp 93-114 cited in Graddol, D, Cheshire, J, and Swann, J. (1987) *Describing Language*. Milton Keynes: Open University Press.
- Benzies, L Sarwar, I (2013) *Grand Theft Auto V*. Rockstar Games.
- Carter, R. (2004) *Language and Creativity: The art of common talk*. Abingdon: Routledge.
- Csikszentmihalyi, M. (1996) *Creativity, Flow and the Psychology of Discovery and Invention*. New York: Harper Perennial.
- DfE(2014) <https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study>, accessed 13/03/2015).
- Glaveanu, V. (2013) Creativity in community contexts: The case of folk art. *Thinking Skills and Creativity*.9 pp152-164.
- Goffman, E. (1963) *Behavior in Public Places: Notes on the social organization of gatherings*. New York: The Free Press of Glencoe.
- Grainger, T (2003) Travelling across the terrain in T. Grainger (ed) *The Routledge Falmer Reader in Language and Literacy*. London. Routledge Falmer.
- Gumperz (1977/1999) Sociocultural Knowledge in Conversational Inference in A. Jaworski and N. Coupland (eds) *The Discourse Reader*. London: Routledge pp 98-106.
- Halliday, M. A. K. (1994) 'Language as Social Semiotic' in Maybin, J. (ed.) *Language and Literacy in Social Practice*. Clevedon: Multilingual Matters/ The Open University.pp23-43.



Halpern, D. Millis, K. Graesser, A. Butler, H. Forsyth, C. Cai, Z. (2012) Operation ARA: A computerized learning game that teaches critical thinking and scientific reasoning. *Thinking Skills and Creativity*. 7/2 pp93-100.

Jones, J. (2013) Re-discovering the arts: the impact of engagement in a natural environment upon pre-service teacher perceptions of creativity. *Thinking Skills and Creativity* 8. pp102-108.

Kendon, A (1999/1967) The Negotiation of Context in Face to Face Interaction in A. Jaworski and N. Coupland (eds) *The Discourse Reader*. London: Routledge. pp 367-376.

Kress, G. (2010) *Multimodality: A social semiotic approach to contemporary communication*. London Routledge.

Kress, G. Jewitt, C. Bourne, J. Franks, A. Hardcastle, J. Jones, K. and Reid, E. (2005) *English in Urban Classrooms: A multimodal perspective on teaching and learning*. Abingdon: Routledge Falmer.

La France, M. (1985) Postural mirroring and intergroup relations. *Personality and Social Psychology Bulletin*, 77, 11/2, p207-217.

Marsh, J. Brooks, G. Hughes, J. Roberts L. Wright, K. (2005) Digital beginnings: Young children's use of popular culture, media and new technologies. *Report of the Young Children's Use of Popular Culture, Media and new Technology study*, BBC Worldwide and Esmee Fairbairn Foundation. University of Sheffield. Sheffield.

Maybin, J. (2006) *Children's Voices: Talk Knowledge and Identity*. Basingstoke, Palgrave Macmillan.

Maybin, J. (2012) Towards a sociocultural understanding of children's voice. *Language and Education* 27:5, p383-397.

Mercer, N. (2000) *Words and Minds: How we use language to think together*. London: Routledge.

Ministry of Education, Alberta Canada.(2015)  
<http://education.alberta.ca/teachers/aisi/themes/student-engagement.aspx>  
(Accessed 9/03/15)

Norris, S. (2004) *Analyzing Multimodal Interaction: A methodological framework*. London: Routledge.

OECD / PISA (2003) Learning for Tomorrow's World . Report of the Programme for International Student Assessment. OECD. [http://www.keepeek.com/Digital-Asset-Management/oecd/education/learning-for-tomorrow-s-world\\_9789264006416-en#page6](http://www.keepeek.com/Digital-Asset-Management/oecd/education/learning-for-tomorrow-s-world_9789264006416-en#page6)

OECD/ PISA (2012) Ready to Learn: Students' Engagement, Drive and Self-Beliefs. (Vol 111) <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-III.pdf>

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OECD / PISA (2015) Draft frameworks for 2015

<http://www.oecd.org/pisa/pisaproducts/pisa2015draftframeworks.htm>

O'Halloran, K. (2004) (ed) *Multimodal Discourse Analysis: Systemic Functional Perspectives*. London: Continuum.

Ofsted (2015) School Inspection Handbook

<http://www.gov.uk/government/publications/school-inspection-handbook-from-september-2015>.

Radford, L. (2008) The ethics of being and knowing: Towards a cultural theory of learning in L. Radford, G. Schubring, F Seeger (eds) *Semiotics in Mathematics education: Epistemology, history, classroom and culture*. p215-234 Rotterdam Sense Publishers.

Rodrigues, S. (2007) Factors that influence pupil engagement with science simulations: the role of distraction, vividness, logic, instruction and prior knowledge. *Chemistry Education Research and Practice* 8/1 p1-12.

SASSE (2015) University of the Free State Student Engagement Survey. <http://sasse.ufs.ac.za>

Scheflen, A. (1964) 'The Significance of Posture in Communication Systems', *Psychiatry*, 27: pp316-331.

Shernoff, D, Csikszentmihalyi, M, Schneider, B and Shernoff, E (2003) Student engagement in High School Classrooms from the perspective of flow theory. *School Psychology Quarterly*, 18/ 2 pp158-176.

Sidnell, J. (2006) Coordinating Gesture, Talk and Gaze in Re-enactments *Research on Language and Social Interaction* 39/4 pp377-409.

Short, K. (2004) Researching Intertextuality Within Collaborative Classroom Learning Environments in N. Shuart-Faris and D. Bloome (eds) *Uses of Intertextuality in Classroom and Educational Research*. Greenwich, Connecticut: Information Age Publishing pp 373-396.

Tannen, D. (1989) *Talking Voices Repetition, Dialogue and Imagery in Conversational Discourse* Cambridge. CUP.

Tannen, D. (2007) (revised 2<sup>nd</sup> ed.) *Talking Voices Repetition, Dialogue and Imagery in Conversational Discourse* Cambridge. CUP.

Trowler, V. (2010) Literature Review of Student Engagement

[https://www.heacademy.ac.uk/sites/default/files/StudentEngagementLiteratureReview\\_1.pdf](https://www.heacademy.ac.uk/sites/default/files/StudentEngagementLiteratureReview_1.pdf)

Wennerstrom, A. (2004) *Music of Everyday Speech*. Oxford: OUP.

Wegerif, R. Mercer, N. and Dawes, L (1999) From Social Interaction to Individual Reasoning: An empirical investigation of a possible soci-cultural model of cognitive development. *Learning and Instruction*. 9/ pp 493-516.

Wegerif, R. (1997) 'Factors affecting the quality of children's talk at computers' in R. Wegerif and P. Scrimshaw (eds.) *Computers and Talk in the Primary Classroom* Clevedon: Multilingual Matters.

Vass, E. (2007) Exploring Processes of Collaborative Creativity: the role of emotions in children's joint creative writing. *Thinking Skills and Creativity*. 2/2 pp107-117.