Differential participation in whole-class discussions and the construction of marginalised identities

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Abstract

Previous researchers have observed differences in the quantity of teacher-pupil interactions experienced by pupils from different social backgrounds. However, there has been little attempt to explore the qualitative nature of such differences and their impact on pupil learning. In this paper I report on an ethnographic study undertaken in a Year 5 primary classroom in the UK focusing on pupil participation in whole-class discussions. I present a typology for identifying productive and non-productive interactions in order to explore the relationship between participation and pupil access to classroom learning processes.

The qualitative analysis of audio and video data shows that some children engage in productive exchanges with teachers more often than others, and that this variation may be linked to an implicit set of social norms embedded in the classroom's micro-culture. The reasons behind such differences primarily relate to teacher expectations of ability and the cultural capital that pupils bring into the classroom, which both impact upon the communicative behaviour of teachers and pupils. Drawing on Lave and Wenger's theory of learning as participation in practice, I argue that patterns of unequal participation in whole-class discussions may lead to the construction of different types of pupil identities within the classroom. Pupils who are consistently involved in productive interactions come to see themselves as full participants or learners, whilst those involved in non-productive interactions find themselves marginalised from the practice of classroom learning.

I conclude that, in order to tackle issues surrounding educational disadvantage, there is a need to address the systems and processes that reproduce wider social inequalities within the classroom micro-climate.

Introduction

A substantial body of research has highlighted differences in the quantity of classroom interactions experienced by pupils according to their social class, race and gender (Graddol & Swann 1989; Howe 1997; Ogilvey et al 1992; She 2000). For example, Biggs and Edwards (1994) looked at teacher-pupil interactions experienced by Asian and white children and found significant differences in the number of interactions initiated by teachers. However, one criticism posited of such research is the over-simplification of the relationship between pupil membership of a particular social group (eg boys/girls) and the quantity of interactions they experience (Hammersley 1990). Researchers have questioned whether the allotment of pupils to homogenous groups is appropriate to our understanding of pupil participation, given that the typical classroom contains an assortment of individuals with varying personalities and behaviours.

Myhill's (2002) recent study on the effect of gender on patterns of interaction has pinpointed the prior achievement of pupils as crucial in determining who experiences what in classroom discussions. She argues that the combination of pupil achievement and gender plays a much stronger role in determining the kinds of interaction a pupil experiences than just gender alone. These findings suggest a need to explore the qualitative nature of differential participation in classroom discussions and, perhaps more significantly, investigate the impact this may have on pupil learning.

Over the past four decades, researchers investigating the qualitative nature of classroom communication and learning have, perhaps unintentionally, established various modes of talk as productive and non-productive (Mercer 2000, 1995; Mercer & Wegerif 1999; Norman 1992; Wells 1999). Drawing on Neo-Vygotskian theory, Edwards and Mercer (1987) argued that classroom talk is at its most effective when teachers use it to create shared experiences which they and their pupils can utilise in future conversations as a joint frame of reference – for example, the teacher's use of 'we' statements to relay his/her interpretation of a topic as shared by all members of the class. The establishment of 'shared mental contexts' is presented by Edwards and Mercer (1987) as the key ingredient of successful teacher-pupil interactions, since the pupil comes to share the teacher's view of the world and becomes party to knowledge which she/he already possesses.

Other sociocultural researchers have also posited this point. Rogoff (1990) has argued that the child's acquisition of new knowledge requires inter-subjective communication with a more capable adult or peer; and Cobb and Bauersfeld (1995) suggest that productive learning relationships emerge when teacher and pupils interact with 'taken as shared' understandings. The earlier work of Barnes (1976) pinpointed the significance of dialogic behaviour in creating and sustaining shared understandings within an interaction. He argued that genuine ownership of meaning can only be obtained by pupils when they are allowed to play a highly active role in the interaction and are given the opportunity to engage in sustained conversations over time (Barnes 1992; Barnes & Todd 1995). Barnes' account of *exploratory talk* is presented as the ideal learning scenario, where teacher and pupil are engaged in the active pursuit of building shared ideas as part of a collaborative venture.

Researchers examining the relationship between classroom talk and learning have also turned their attention to what might hinder the learning process. Here, the primary focus has been on the strongly imbalanced power relationship between teacher and pupil, enacted within conversations through highly controlled question and answer sequences (Dillon 1990; Wood 1992) or 'cued elicitation' (Edwards & Mercer 1987). The teacher's extensive control over the form, structure and content of an interaction is detrimental to learning because it forces pupils into a passive, mono-syllabic role where they are unable to give their own interpretations of events, reveal their knowledge or uncertainties or actively seek out the meanings relayed by the teacher (Norman 1992). The work of the National Oracy Project highlighted how successful classroom interactions can be when teachers attempt to disrupt this power imbalance (Brierly et al 1992; Corden 1992) or shift 'the locus of expertise' towards the pupil (Wells 1992).

This branch of sociocultural research has provided valuable insights into the ways in which teachers and pupils use talk to construct knowledge together. However, such studies have also tended to focus on pupils as a homogenous group, depicting their behaviour as uniformly responsive to what the teacher does or says. Given the quantitative findings reported earlier, there is a need to consider whether some pupils experience qualitatively different interactions with the teacher than those typically experienced by others. Do some children experience productive forms of interaction with the teacher whilst others do not? Do some children consistently experience unproductive interactions? How might this impact their access to classroom learning processes?

The study

Fuelled by the concerns raised above, the study I report here was intended to be an exploration of the nature of differential participation through a case study of one Year 5 primary classroom (Class 5W). The three broad aims were to:

1. Determine if some children consistently experienced different types of interaction with the teacher than others.

2. Determine why this might be the case, taking into account explanatory factors such as teacher expectations and pupil cultural capital (Bourdieu & Passeron 1990).

3. Assess if the difference between the types of interaction pupils experienced were maintained across time.

The research design involved classroom observations of whole-class discussions during mathematics lessons, recorded using a video camera and radio microphones over a period of five months. Interviews were also conducted with the teacher and pupils, during which they were shown videos of recorded lessons and asked to comment on what was happening. This required them to use their insider knowledge regarding interpretations of classroom talk and gave them a voice in the analysis process. The use of different data collection techniques (eg video, radio microphones) was crucial to the research design, since it enabled the collection of a

vast amount of contextual information required to interpret classroom talk (Mercer 1991).

The observation data was analysed using a coding framework to identify productive and non-productive interactions. Edwards and Mercer's (1987) analysis of classroom talk was used as a basis to identify the verbal actions (eg closed questioning by the teacher) evident in each interaction. Interactions were classed as productive if they contained verbal actions that appeared to create and maintain the shared understandings underpinning the learning process (Edwards & Mercer 1987). Similarly, interactions were classed as unproductive if the teacher appeared to control its shape and form and the pupil played a monosyllabic, passive role (Wood 1992).

The coding framework also considered aspects of the social context unique to the institutional practice of classroom learning that appear to affect the meaning of what is said for either teacher or pupil. I identified salient themes and generated codes from the data based on my interpretation of how the content of what was said in an interaction related to these themes. The themes were: pupil cultural capital, teacher expectations, and the impact of external social practices. (NB: given the limitations of space and time, these themes are not intended to provide an exhaustive account of the classroom's context; they refer to issues which emerged as important when looking at children's access to learning.) I also analysed the interview data thematically using similar codes to the contextual analysis of the observation data. The overall aim of this analysis process was to interpret the data using different kinds of contextual knowledge (gathered as a result of the ethnographic nature of the research) that influence the meaning of what is said.

Findings

Table I   **Productive and non-productive interactions**

Pupil	Productive interactions	Non-productive interactions	Total no. of interactions
Group A			
Toby	10	5	15
Jeremy[1]	11	5	16
Phillip	30	22	52
Simon	18	12	32

[1]Pupil left half-way through the period of observation.

Sean	40	22	64
Tim	19	7	31
Chris	7	3	12
Daniel	32	24	56
Group B			
Nelson	8	13	22
Jason	7	17	28
Hasan	4	6	17
Carl	2	4	11
Erica	10	13	23
Group C			
Jennifer	3	4	10
Jane	2	2	6
Alice	3	3	7
Rosie	3	2	5
Chantel	1	2	3
Rachel	3	6	9
Angela	0	2	3
Samantha	0	2	4
Paul	0	0	2
Group D			
Joanne	5	4	12
Kathryn	7	6	14

James	21	20	41
Sian	9	10	21
Peter	12	12	28
Ben	8	9	18

Table 1 displays the number of interactions that each pupil was involved in throughout my period of observation. These findings reveal not only variation in the quantity of interactions experienced by different pupils (as with previous research), but also in the quality of those interactions in terms of learning. For example, the student Toby was only involved in 15 interactions, whereas Jason was involved in 28. However, although Toby was involved in fewer interactions, they were more productive because the verbal actions evidently appeared to foster shared understandings with the teacher.

In this sense, it is apparent that quantifying pupil participation in classroom discussions does not provide the full picture. Qualitative analysis reveals variations in the type of interactions pupils experience which, as Hammersely (1990) argues, have important consequences in terms of their learning.

In order to explore these consequences further in this study, the pupils were categorised into one of four groups according to which type of interaction they experienced most. Group A consisted of pupils who experienced more productive interactions than non-productive; Group B contained those who experienced non-productive interactions more often; Group C contained pupils involved in ten interactions or less over the entire period of observation, and finally; Group D was comprised of pupils involved in productive and non-productive interactions on an equal number of occasions, plus or minus 1 (eg James had 20 interactions which were coded as productive behaviour, and 21 interactions which were coded as non-productive). This revealed that certain pupils within the class (ie groups B and C) were disadvantaged in the learning process. Only children who were regularly involved in productive interactions (group A pupils) were accessing conversations that genuinely fostered shared understanding between teacher and pupil.

Why did these differences occur?

Table 1 illustrates the consistency of the teacher's and pupils' behaviour throughout my period of observation. The consistency of such behaviour is important because it suggests that the emergent patterns of interaction (as either productive or non-productive) had become normative for each group of pupils. The teacher and pupils acted in accordance with those norms for differing reasons, as follows.

The teacher

Research has highlighted how teachers vary their communicative behaviour in line with the perceived needs of the pupil and their judgement of ability. Cooper and Baron (1977) found that teachers use more controlling forms of interaction with students who are perceived to be of low ability than they did with high ability students. Furthermore, Cooper, Hinkel and Good (1980) also found that teachers' perceptions of control over interactions with a pupil were related to expectations of ability. Thus, teachers tended to interact with students they had lesser expectations of privately and less often, because they perceived that this would provide greater success in terms of teaching.

As such, both studies present an established link between the teacher's expectation of a pupil's level of ability and the amount of control the teacher exerts within interactions with that pupil. This suggests that, in Class 5W, pupils who were perceived to be of high ability were allowed to play a more active role in interactions which provided them with the opportunity to negotiate shared understandings with the teacher. This emphasis on teacher expectations regarding pupil ability may explain why high achieving students were stronger participants in the whole-class discussions observed by Myhill (2002).

Group A pupils

Group A pupils who consistently took on a dialogic role in interactions appeared to view specific kinds of active behaviour as appropriate to the context of discussions in the classroom. Their behaviour tapped into the underpinning pedagogic goals of classroom interactions which permeated the teacher's intended meanings. An example of this can be seen in Extract 1.

Extract 1   Example of productive interaction with group A

This example is taken from one of a series of lessons looking at 'data' in which the class had been collecting daily temperatures during the week. The teacher wanted to persuade the pupils to put the temperatures into a graph so they could compare the figures over the period of data collection. Here, the teacher is asking for ideas on how they could display the data pictorially, ie in different kinds of graphs.

1. **T**: How would we represent that sort of information? All that information
2. on one graph.
3. **Phillip**: You could put them ... like the Monday underneath it like that.
4. **T**: You could. You could put Monday, Tuesday, Wednesday, Thursday,
5. Friday at the bottom of your graph. That's true. So let's assume it's going
6. *to be just like most graphs – it has a vertical and a horizontal axis and at*
7. *certain points it has little bits of information. And at the bottom Phillip*

8.   you're suggesting in these boxes at the bottom we put Monday, Tuesday,

9.   Wednesday, Thursday, Friday *(drawing it on the board)*. We can't do

10.   Saturday and Sunday can we, but we can do the following Monday,

11.   Tuesday, Wednesday, Thursday, Friday. Yeh? So what we gonna do

12.   now? How we going to ... how we going to show the weather on Monday of

13.   last week? *(pause)* Well it was sunny. What could you do to show that?

14.   **Phillip**: Put it in a colour ... of the sun. Put yellow.

15.   **T**: Good idea. So instead of using the symbols as they are, we could make

16.   them into the colour to represent that symbol. So if we're gonna use ... if

17.   we're gonna use colours to represent sun and rain and fog and so on, what

18.   else are we going to need on our graph?

19.   **Phillip**: What the temperature is.

20.   **T**: No we're thinking about the colours now. Are those colours gonna mean

21.   anything to anyone apart from you? Unless you do what?

22.   **Phillip**: You put a little key down the side.

23.   **T**: Little key to represent the colours. So that yellow equals sunshine.

24.   **Daniel**: And red equals ...

25.   **T**: Red equals cloud, blue equals whatever ...

26.   **Daniel**: Rain.

In Extract 1, Phillip displays behaviour that suggests he is tuned in to the teacher's pedagogic aims. His appropriate suggestion in line 3 indicates that he recognises the purpose behind the teacher's question and is aware of the general aim of the discussion (ie to explore ideas about pictorial representation of the temperature data). He is also aware of the shared body of experience that the teacher implicitly draws on in lines 20–21.

Although he has previously provided an incorrect answer, in line 22 he manages to re-enter the teacher's frame of reference because he recognises that her question refers to previous work the class has done on 'keys'. The success of the teacher's cue here is evident in line 23, where she confirms that Phillip has provided the generic answer she was looking for. Additionally, her use of 'we statements' throughout the interaction serves to establish Philip's final answer as the product of a joint venture which is to be shared by the whole class. This indicates that she sees

him as 'one of us'; she establishes his identity as a participant in the community of practice (Lave & Wenger 1991).

The productive nature of this interaction means that Phillip is able to negotiate meanings with the teacher that are appropriate to the practice of learning school mathematics. The consequence of this process of negotiation is ownership of meaning (Wenger 1998). He has developed one method with the teacher for representing the data in a graph and, therefore, has fulfilled the aim of the discussion. Furthermore, Phillip's participation in this interaction displays a sense of legitimacy recognised by the teacher (as a figure of authority in the classroom) in that she allows him the freedom to develop his ideas. Indeed, his capacity to explore ideas and make suggestions in Extract 1 suggests that Phillip is acquiring knowledge of the 'publicly [and institutionally] recognised ways of acting' in mathematics lessons (Solomon 1998, p 379).

Group B pupils

Group B pupils, who were involved in non-productive interactions more often, appeared to behave in accordance with the communicative role the teacher accorded them. An example is provided in Extract 2 below.

Extract 2   Example of non-productive interaction

The task under discussion was from the textbook and was entitled 'Data 1'. The question under discussion required pupils to categorise 3D shapes into a three-circled Venn Diagram. The pupils were required to categorise shapes according to whether they fulfilled three conditions: i) they were red; ii) they had five faces, or iii) they had at least one square face. If the shape had more than one of these properties, it would be placed in an intersection of the appropriate two circles. On the occasion described here, the teacher was focusing on the shape that had all three properties.

1. **T:** So B will go right in the middle there, won't it Hasan? *(she is pointing to*

2. *the centre of the Venn Diagram in the textbook)* B, do you see why it will

3. go in the middle there? (no response) Do you see why it will go in there? Can

4. you explain why?

5. **Hasan:** It's got five faces.

6. **T:** Pardon?

7. **Hasan:** It's got five faces. *(louder)*

8. **T:** Good, it's got five faces, what else?

9. *(silence) (Group A pupils have their hands up)*

10. **T:** That's one reason why, that's not the only reason why it can go in the

11. *middle, is it? What's that say there? (teacher points to one circle in the Venn*

12. *Diagram)*

13. **Hasan:** Red. *(reading from book)*

14. **T:** What does that say there? *(teacher points to another circle in the Venn*

15. *Diagram)*

16. **Hasan:** Has at least one square face. *(reading from textbook)*

17. **T:** And that has got a square bottom hasn't it?

18. **Hasan:** Yeh.

19. **T:** An' it's red and it's also got five faces, so that's the only shape that will go

20. in the middle, the rest you're gonna have to decide, some might go in between

21. red and has a square face or might go in between red and has five faces, it

22. might not belong in any of them, in which case you put the letter outside the

23. Venn diagram.

In contrast to in Extract 1, here the teacher displays much greater control over the shape of the interaction. This is evident in the involuntary nature of Hasan's participation; he is called upon by name and strongly urged to take part in the discussion. The long process of cued elicitation involves the teacher trying to draw out the correct response from Hasan using heavily clued questions. Eventually, she resorts to forcing him to read out the name of the categories from the textbook as a semi-adequate mode of answering (lines 13 and 16). However, this is an incomplete answer and she reformulates what he has read out in order to answer her own question in the correct manner (lines 19 to 23). Edwards and Mercer (1987) have noted that such episodes of cued elicitation often prevent a pupil from formulating thoughts for him/herself through talk. In this extract, Hasan plays a highly passive role in the interaction and is, therefore, unable to actively seek out the teacher's understanding of the situation.

This analysis does not suggest that Group B pupils were completely unaware of any disadvantage they were experiencing in the classroom, but that they were unable to identify either the source of such disadvantage (ie the substantially imbalanced power relationship between teacher and pupil) or ways in which it could be productively overcome. Their consistent involvement in non-productive interactions was due to the alternative pedagogic device the teacher used with them,

justified by her belief that they were of low ability. This device involved a different set of rules in which the pupils' role was to fulfil the teacher's communicative demands rather than engage in dialogic conversation (of the kind which is productive for learning). Consequently, Group B pupils perceived non-productive interactions as the norm and, therefore, continued to play the passive role assigned to them.

Group C pupils

Group C were involved in less than ten interactions during the entire observation period, which means it is not possible to make judgements on the quality of talk they experienced. The limited nature of their participation means we cannot judge whether they consistently experienced one type of interaction over another. However, observations of their behaviour outside the context of whole-class discussions indicate that they were more active in other types of classroom activity (eg pupil-pupil discussions). This suggests that the pupils in Group C perceived a specific role which stipulates quietness in the public sphere as appropriate to whole-class discussions.

Group D pupils

Further analysis of participation over time revealed that these pupils eventually conformed to the social norms in operation in Class 5W by moving towards the typical behaviour associated with one of the other three groups. For example, James began the year with very little participation at all (reminiscent of Group C); then moved towards Group B (evident in his increased involvement in non-productive interactions); and then, at the start of the second term, switched to productive interactions and became a regular member of Group A. Reasons behind the changing nature of their participation have been discussed in more detail elsewhere (Black 2002), but it is worth noting that the apparent variability in the behaviour of these pupils (and the teacher) simply reflected a slower rate of integration into the social norms regulating classroom behaviour.

Pupil access to classroom learning

The long-term impact of these qualitative differences on pupil learning may be far-reaching, since consistent experience of productive interactions not only provides the pupil with greater access to shared understandings with the teacher, but also the pedagogic values, assumptions and tools manifested in sharing a common enterprise (Lave & Wenger 1991; Mercer 2000; Wells 1999). Wenger (1998) argues that the acquisition of such practice-specific meanings and tools enables the individual to take on a certain identity – an identity associated with legitimate membership of the relevant practice (in this case, classroom mathematics) (Lave & Wenger 1991).

Wenger (1998) also raises the possibility that some individuals can become marginalised from a community of practice since 'members whose contributions are never adopted develop an identity of non-participation that progressively marginalizes them' (p 203). For Wenger, identification with a community of practice requires negotiation and, subsequently, ownership of meaning of the kind

we saw in Extract 1. Without this, the identity of the individual is one of 'powerlessness, vulnerability, narrowness, marginality' (p 208).

Therefore, if we assume that engagement in productive interactions reflects participation in the practice of classroom learning, this leads to a number of possible identity types emerging in Class 5W. Group A pupils who participated in mostly productive interactions displayed an increase in expertise and subsequent movement towards the centre of the social practice of the classroom, ie they moved towards identities of full participation. For example, in the extract below, Simon, a Group A pupil, displays an understanding of himself as a participator in classroom discussions.

Extract 3   *Simon's self confidence regarding his participation in class discussions*

1. **I**: Do you often not know them *[the answers]* or do you usually know.

2. **Simon:** I usually know them.

3. **I**: But which do you prefer? *[putting hand up or being selected to answer]*

4. **Simon**: Well putting your hand up really.

5. **I**: Just ... you don't know why you just do it?

6. **Simon**: Yeh … yeh it's ok. I can usually answer the questions.

7. **I**: Yeh ok then and when you don't answer what do you usually do? When

8. you don't know the answer?

9. **Simon**: If I don't know the answer … well ... well I usually, I usually say

10. nothing and then she'll and then sometimes she'll go on to somebody else.

11. That hasn't happened often though.

Group B pupils who experienced mostly non-productive talk appeared to be coping with their involuntary involvement in classroom discussions, but at the same time were not accessing situated meanings embedded within the practice of classroom mathematics, ie they moved towards identities of non-participation. In the extract below, Hasan (Group B pupil) describes himself as reticent about participating in class, suggesting that he sees himself as someone who is a non-participant. However, rather than attributing this to ability, he refers to his personality (ie another apparently stable, internal trait) as being the root of the problem.

Extract 4   Hasan's shy behaviour in class discussions

1. **I**: Do you like talking in class? You know like in the video where Mrs

2. Williams is talking to everyone and everyone answers the questions.

3. **Hasan**: No. *(hesitantly)*

4. **I**: No! Why not?

5. **Hasan**: I'm shy. I don't like talking ... I'm shy.

6. **I**: You're shy? Are you?

7. **Hasan**: Yeh.

8. **I**: Oh I never would have thought that Hasan, OK.

Group C participated in whole-class discussions on a very limited basis which suggests that, like Group B, they did not take on identities of full participants in the practice of classroom learning processes but, rather, moved towards identities of non-participation because they were not involved in productive interactions with the teacher on a consistent basis. Group D, who moved towards one of the other three groups as time progressed, took on various identities throughout the period of observation in line with the type of interactions they eventually began to experience on a consistent basis.

The varied nature of these emerging identities is a concern, given that the pupils in Class 5W all had similar levels of experience because they had been in the class for the same amount of time. Therefore, they all should, ideally, have been perceived (by the teacher and each other) as having similar levels of competence, since learning occurs through the accumulation of lived experience. Yet this was clearly not the case. The findings suggest that, although some pupils adopt identities that have commonalities to the notion of the 'learner' (Group A), others may adopt identities associated with marginalisation, through regularly experiencing exclusion from the practice. For the latter, the consistent experience of a very strongly imbalanced power relationship within teacher-pupil interactions serves to exclude them from the practice of classroom learning, since such interactions restrict access to the underlying pedagogic meanings that are necessary pre-requisites for future participation in the practice.

Pupil participation and cultural capital

I have so far pinpointed qualitative differences in teacher-pupil interactions and highlighted how such interactions play a crucial role in the construction of pupil identities of participation and non-participation in the classroom. However, I have not commented on the role of the pupil's social background in this process.

In line with social reproduction theory, the analysis portrayed here rejects traditional measures of class (eg father's occupation) in favour of examining pupils' use of legitimate forms of social and cultural capital (Bourdieu & Passeron 1990; Willis 1977) as evidenced either in their behaviour or interviews. Overall, there

appeared to be a relationship between the pupils' membership of the groups and the kinds of cultural capital they displayed in the classroom or in their interviews (Bourdieu & Passeron 1990).

Group A consisted of middle-class children, in that their behaviour indicated knowledge about the education system that could be used as cultural capital in order to gain academic success 'like trumps in a game of cards' (Bourdieu 1991, p 230). Such legitimated knowledge was evident in pupils' comments concerning activities outside of school or the attitudes of their parents. For example, Simon described the importance of his attendance at the Grammar School for his future educational success and told me how his parents had set about obtaining a mock entry exam paper so he could prepare.

Other examples of this include pupils stating explicitly to the class that their parents had assisted them with their homework or that they had performed well on the locally used Richmond tests and were in a good position to attend the local Grammar School. Children in the other two groups did not make such comments, which suggests that Group A's consistent involvement in productive interactions was in some way associated with their possession of the right kind of cultural capital.

The pupils in Group B appeared to approach school life with a different perspective on the whole process. These children were mainly working-class boys, with the exception of Erica, who also displayed behaviour associated with working-class culture. The kinds of conversation that Group B pupils had with each other were in line with those observed by Willis (1977) in his study of working-class culture. These pupils appeared to highly value any challenges to authority either in the home or at school. Examples included a rather animated discussion about the merits of swearing at home, and a conversation in which Simon's participation in extra-curricular activities was referred to as 'stupid'. The kind of cultural capital they had acquired through their social background did not value the fact that the education system is a socially dominant practice. In fact, they rejected such notions as yet another form of authority.

So far I have not commented on the fact that Group C was comprised of mostly girls, in order to avoid making generalisations about the relationship between gender and participation. Yet the gendered nature of the group and the consistency of their behaviour with previous research is difficult to ignore (Howe 1997; She 2000).

Given that cultural capital appeared to be important in determining the learning experiences of pupils in the other two groups, it seems worth exploring the capital displayed by Group C in order to consider potential reasons behind their lack of involvement in whole-class discussions. Bourdieu (1986) argues that gender acts as a distributing mechanism *within* a social group, suggesting that it is a secondary characteristic to social class in terms of positioning individuals into a specific social status in wider society.

The cultural capital demonstrated by the girls in Group C related to their gendered position within working-class culture and conformed to many of the female stereotypes portrayed in previous research (Skeggs 1997). Their conversations consisted of discussions over the presentation of their work, since they knew this was highly valued by the teacher – a form of cultural capital that was most apparent in a lesson in which the class was making Christmas board games. Here, they approached Mrs Williams (the teacher) and I on many occasions in order to show the elaborate nature of their artwork and to gain recognition of what they had done. The teacher responded by holding up their work to the rest of the class as good examples.

In addition to this, the girls in Group C were the only pupils involved in extra-curricular activities that emphasised typically feminine roles. For example, on one occasion they were absent from the lesson because they were rehearsing a ballet-style dance routine for the Christmas play. They had all volunteered to be part of this routine, which provided an opportunity to utilise their femininity as a kind of cultural capital within the class (Skeggs 1997). Furthermore, Group C members were encouraged to participate, which potentially suggests that the school subtly reinforced wider social beliefs about the kind of roles women inhabit and use. In the following conversation on boys and homework, Mrs Williams also appeared to be aware of the feminine cultural capital that the girls brought into the classroom.

Extract 5   Mrs Williams de-legitimises feminine cultural capital

1. **I:** Yeh I've … well I've read a study ... you know there's all this stuff about

2. boys underachievement and homework ...

3. **T:** In fact I'm going to a course er a week after half term on exactly that:

4. 'underachieving boys'.

5. **I:** Well I read something about it being a sort of social thing and how men

6. don't see their identity as, you know going home and doing homework

7. whereas women do because they go home from work and do the

8. housework, you know, so that kind of work in the household is a different

9. … is something they're much more experienced with so they'll go and do

10. homework ...

11. **T:** And play schools and things with their friends and that ... boys wouldn't

12. would they? You see, it's a bit cissy that in it? … I mean they seem to want

13. to take more care of their work, they're often tidier and more careful about

14. their presentation but boys catch up later on don't they?

Although, on this occasion, she does not refer directly to the girls in Group C, Mrs Williams does display an awareness of the typical characteristics of girls' behaviour within the classroom (ie an emphasis on presentation and neatness). However, her final comment serves to de-legitimise this form of cultural capital, since she suggests it is not useful, because boys 'catch up later on'. In this way, not only does Mrs Williams' perception of female pupil characteristics match the kind of cultural capital the girls in Group C used, but her comments also suggest that she does not place high educational value on such feminine forms of capital.

It therefore seems likely that, as with Group B, these girls lacked the symbolic cultural capital required for legitimate membership to 'classroom mathematics' as a pedagogic practice. This was implicitly perceived by the teacher and affected her behaviour – she did not exert control in interactions, but somehow negotiated with these girls a coping mechanism where they stayed silent on the periphery of the classroom in whole-class discussions, but were praised for neatness and presentation elsewhere.

The findings of this study suggest a relationship between pupils' typical involvement in either productive or non-productive interactions and the kind of cultural capital they displayed in the class. They also suggest that cultural capital plays an important role in the process by which pupil learner identities are constructed (see Figure 1). When a pupil demonstrates symbolic forms of cultural capital in his/her behaviour, this becomes naturalised as evidence of a high level of ability (Bourdieu & Passeron 1990). Consequently, the teacher forms high expectations of that pupil, accords him/her certain communicative rights, and alters his/her own behaviour to a less controlling format. This results in a productive interaction and recognition from both teacher and pupil that the pupil is a legitimate participant in the classroom.

Alternatively, if the pupil does not possess such symbolic capital, then a process of marginalisation is set in motion, which transforms an apparent lack of ability into non-productive interactions. The teacher has lower expectations of such pupils and, therefore, perceives the need to use highly controlled forms of communicative behaviour that reduce the pupil's involvement to passive, monosyllabic responses. This not only prevents the pupil from actively taking ownership of the meanings under discussion, but also signals to everyone involved that her/his identity is one of non-participation.

Figure 1 below illustrates this process in more detail and highlights how it becomes a self-perpetuating cycle once begun; the pupil's identity as participant or non-participant continues to influence teacher expectations over time and consequently determines his/her pedagogic behaviour. The patterns of differential participation observed in Table 1 are evidence of this reproductive cycle, and they

highlight the problematic nature of gaining access to classroom learning processes for pupils who do not possess the right kind of cultural capital.

Figure I   Impact of cultural capital on classroom interactions and pupil identity
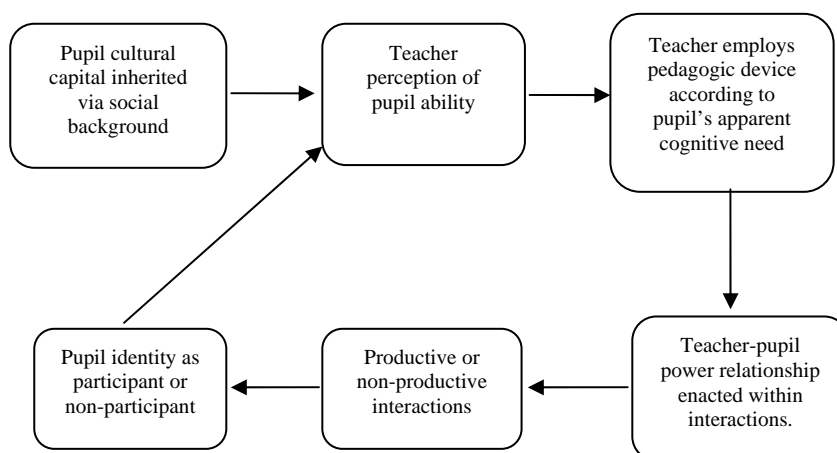
Conclusion

The findings of this study have revealed qualitative differences in the interactions experienced by pupils in whole-class discussions and, like the earlier quantitative studies reported at the beginning of this paper, they appear to demonstrate a relationship between a pupil's social background and participation in whole-class discussions. Whilst some pupils consistently experience interactions that are productive in terms of learning, others are marginalised by their regular involvement in interactions that are non-productive. The evidence suggests that a pupil's possession of symbolic forms of cultural capital may be a crucial factor in determining who gets to experience what type of interaction in the classroom, since it informs teacher expectations regarding pupils' ability and, subsequently, their behaviour.

The long-term implications of such qualitative differences are numerous, since a pupil's consistent involvement in productive/non-productive interaction is as much about the construction of an identity as it is about access to shared understandings with the teacher. Pupils that do not engage in productive interactions on a regular basis, such as those in Group B, will potentially become marginalised from the practice of classroom learning and assume identities of non-participation.

Stables (2003) has recently argued that the link between classroom dialogue and identity development is under-researched, and there has been little attempt to analyse at the micro-level how the learning processes pupils experience relate to their emerging identities as young people and 'learners'. In writing this paper, I

hoped to somewhat address this gap by providing details of the process by which differential experiences of classroom interactions construct various forms of pupil identity that may have long-term implications for pupils' future educational success. However, this requires an underlying theory of 'identity', which highlights the pro-active input of learners in deciding their future, but simultaneously recognises the influence of the cultural and institutional histories of the practices in which such identities are constructed (Holland and Lave (2001) refer to this as 'histories in person').

Individuals construct and negotiate their own identities through engaging in activities that have reciprocal relations with the relevant practice (Solomon 1998) and, in doing this, pupils move along the learning trajectory from novice to expert (Lave & Wenger 1991; Wenger 1998). Following this line, our understanding of pupils' failure to learn should not be conceived of as a problem of cognitive challenge or difficulty of topic/subject, but in terms of an understanding of how the wider politics of class, race and gender impact the classroom's micro-climate and the construction of identities of non-participation.

The findings presented in this paper indicate that not all children start out on an equal playing field when they enter the classroom. Some are more likely to become learners than others, because their cultural background provides them with the capacity to recognise dialogic forms of behaviour as appropriate to classroom discussions, which informs teacher expectations and behaviour. At the same time, the teacher's dominant position and need to deal with the contextual constraints evident in modern-day classrooms means that she/he is also involved in shaping the kind of identity each pupil takes on. The way in which she/he interacts with a pupil plays a crucial role in determining how others will see those pupils and how they see themselves.

However, it is not my intention to pinpoint individual teachers and their actions as responsible for the processes that produce educational inequality. The assumptions and behaviour I have observed are inherent within the social practice of classroom learning processes in general, and relate to the goals and functions of that practice. As Bourdieu reminds us:

> ... the characteristic traits of the teaching and the teacher which the most critical commentators mention only as grounds for condemnation, properly belong to the very definition of the function of education. (Bourdieu 1971, p 178)

The social practice of the classroom (including the accumulation of the activities and verbal actions within it) and their complex relationship with other external practices contributes to the social reproduction of inequality. In this sense, we must endeavour to move away from observing educational activities – such as those noted by Barnes (1976) and Edwards and Mercer (1987) – as individual isolated instances, and move towards examining the goals and purposes of the practices they constitute, including the implicit assumptions those goals might carry with them.

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