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Pupil perspectives on gender and learning in Year 5: a study of pupils' collaborative talk in pairs.

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Abstract

This study examines pupils' perspectives on gender and learning through an in-depth analysis of their collaborative talk in pairs. With gender and talk so prevalent in educational discourse, as combined and discrete topics, the following paper analyses both these social factors to determine the extent to which children are aware of them, and their subsequent implications. A critical review of the breadth of literature on the topic contextualises the study of a Year 5 Class in a Primary school in Cambridge, whose perspectives are the focus of this small-scale study. Through questionnaires and interviews, it reveals that children recognise the value of talk and collaboration as beneficial to their learning, but overwhelmingly prefer working with a partner of the same sex. This is despite acknowledging that they may work better with a partner of the opposite sex. The study considers the various reasons for this, the ways in which this may be addressed and implications for implementation in the classroom.

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Introduction

The topics of gender and talk have permeated educational discourse for a number of years, both as discrete and combined concepts. Both are seen within education as influential social factors that can have an effect on achievement, attainment and pupils' learning, as both predictors and determiners of a child's success (Francis & Skelton, 2005; Mercer & Littleton, 2007). Therefore, as Leman (2010:216) suggests, "it should not be surprising that gender differences in classroom communication have been presented as strong candidates for explaining variations in educational outcomes."

Levy and Haaf's (1994:459) research suggests that gender is one of the first social categories that humans learn, and due to the subsequent aspects of socialisation in conforming to gender roles, Whitehead (2006) argues that "girls come to school better prepared to meet its demands than boys." With increasing evidence highlighting the "importance of collaborative talk in groups" (Sutherland, 2006:1), and the inextricable links to talk benefiting learning and development (Johnson & Johnson, 1997; Warrington, Younger & McLellan, 2003), this paper intends to look at pupils' perspectives on gender and talk. It will attempt to elicit whether such factors permeate their actions and interactions within the classroom environment, to establish whether this could affect achievement.

With this in mind, the paper intends to explore the following questions:

- What are children's perceptions of talk in mixed-sex pairs?
- How do they feel about working in mixed-sex pairs?
- Do children feel that mixed-sex pairing is more beneficial to either sex?

Literature Review

Importance of Gender and Talk

Gender, and the "so-called gender gap", has been the topic of discussion for a number of years according to Warrington and Younger (2000:494) and has been the subject of "both media and government concern". Within the United Kingdom's education system, Cassen and Kingdon (2007:xi) highlight that boys outnumber girls as low achievers by three to two and these poor reading and writing scores at primary school are "significantly associated with later low achievement." Furthermore, the latest statistics from the Department for Education (DfE) state that

in 2010, "girls outperformed boys in all four elements of Key Stage 1", with the largest attainment gap in writing, with 86.6% of girls achieving the expected level, compared with only 75.5% of boys (p2).

A myriad of possible reasons have been given for this disparity. Gender differences are however seen as being "social (societal or cultural) rather than biological" according to Leman (2010:217), with expectations being transmitted within an educational context in a variety of ways. This suggests that if a divide is perpetuated by socialisation it can be addressed in order redress issues of imbalance with regards to achievement. Arnot, David and Weiner (1999:11) suggest that schools "both generate gender differences and are the means by which such differences are experienced or challenged."

There are great societal pressures to conform to hegemonic masculinities and femininities (Connell, 1987; Mac an Ghail, 1994; Arnot & Mac an Ghaill, 2006) within the classroom environment, and talk has been suggested as a way of mediating this "gendered" divide of what is seen as socially appropriate for boys and girls (Salomone, 2003; Arnot & Mac an Ghaill, 2006). This in turn could help to alleviate feelings of marginalisation, and reduce the need to replicate social expectations or reproduce inequality (Bowles & Gintis, 1976; Willis, 1977), which can have long-term implications on educational achievement (Francis & Skelton, 2005; Younger, Warrington & McLellan 2005).

Leman (2010:217) states that "communication is *the* vehicle through which children can become empowered or disempowered (enfranchised or disenfranchised) within educational contexts" [his emphasis], highlighting the importance of talk within the school environment. Consequently, talk could not only be used to alleviate symptoms of gender inequality but enhance the thinking and development of learners (Neff, Cooper & Woodruff, 2007). Vygotsky's (1978) "Zone of Proximal Development" (ZPD) is often cited as a key example of how children, through talk and collaboration, can work towards achieving greater things. He states that "language arises initially as a means of communication between the child and the people in his environment" (p89), and it is this acquisition of language that allows the child to communicate and "awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers" (p90).

Many, such as Littleton and Mercer (2010:271), argue that "working and talking together can provide a powerful support for children's cognitive development and learning" as it can bring the

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child to a greater level of understanding, and ultimately achievement. Therefore, with gender as a category being problematic, it is worth analysing the potential ways of alleviating issues through talk, as Alexander (2010:105) suggests: "in order to find ways whereby the immense cognitive, social, affective and educational potential of talk can be better exploited in our classrooms."

Influence on one another

Talk is an integral part of the semiotic process of learning. Halliday (1993:93) stated that: "when children learn language, they are not simply engaging in one kind of learning among many; rather, they are learning the foundation of learning itself." Furthermore, Alexander (2008:9) argues that "reading, writing and number may be the acknowledged curriculum 'basics', but talk is arguably the true foundation of learning." As a central tenet of collaboration within the current curriculum, talk can be seen to transcend boundaries (irrespective of gender, race or class) and is without cost or requiring resources. Although some may lack access to social, cultural or economic forms of capital including the benefit of quality dialogue at home (Bourdieu, 1986), which can be used as a predictor of "eventual academic attainment" (Hart & Risley, 1995), it is not to say that they cannot be recipients and participants in high quality, productive educational dialogue within the context of a school environment.

Mercer (2008) lists the three main types of talk within the classroom as being disputational, cumulative and exploratory. Analysing the most common types of talk within mixed-sex pairs will be a useful determiner of their productivity and the benefits of working collaboratively. Alexander (2008:9) states that children "need to talk, and to experience a rich diet of spoken language, in order to think and to learn." His belief in dialogic teaching as a distinct pedagogical approach includes five principles encompassing teaching and talk. He holds dialogic teaching to be collective, reciprocal, supportive, cumulative and purposeful in striving to produce a classroom environment that is highly conducive to learning (Alexander, 2008:28). It can therefore be an environment of experimentation and sharing, without curtailing or limiting the quality of talk. This in turn can help to reduce or negate any gender differences in communication that could otherwise create or reinforce expectations or stereotypes of either gender (Maccoby, 1988; 1998).

Further to this, Asoko and Scott (2006:158) highlight that: "language provides the fundamental means for communicating ideas, but it is also through talk, either with others or 'in our heads', that we can develop personal understanding." Mercer, Dawes, Wegerif and Sams (2004) support this,

suggesting that "children's increased use of certain ways of using language leads to better learning and conceptual understanding", showing the value of talk, which can benefit either sex. Halliday (1993:94) notes that "language is the essential condition of knowing, the process by which experience *becomes* knowledge" [his emphasis], which suggests it is a prerequisite and valued part of the learning process.

According to Whitehead (2006:264), girls are more likely than boys to have been able to develop "communication skills and an ability to work cooperatively" before formal schooling starts, which she argues will "advantage pupils within the primary school." Whitehead (2006:264) further suggests that boys may be "put off" school ... then, through fear of failure, avoid engagement with learning", and "employ a whole range of behaviours to avoid serious engagement with the material and thus fail to make progress."

Leaper and Ayres' (2007:359) research suggests that the differences between the genders with regards to talk are socially constructed, but furthermore are influenced "from early childhood" by "dominant cultural practices." They state that they "establish conditions that often call for different roles and statuses for girls and boys. These different opportunities foster corresponding gender differences in expectations, preferences, and competencies." This in turn can lead to "gender-typed behaviour" according to Leaper and Robnett (2011:129), and through the analysis of the perspectives of the children within this study, it will be interesting to gauge their perception of what they believe about the opposite sex with regards to talk and working collaboratively.

Swann (1992) argues interactions between boys and girls can influence constructions of knowledge, subsequently resulting in differing outcomes for those involved. Scanlon (2000:463) echoes such comments, suggesting that "particular features of the learning experience are altered by the gender composition of the groups." She states that such features "range from the way in which conflict is expressed or the task perceived, to differences in the way that dialogue is used." This firmly suggests that there can be differences between the interaction and outcome in mixed-sex pairs, but the case for whom it benefits most is rather less clear-cut. For example, Underwood, McCaffrey and Underwood's (1990) research suggests that boy-girl pairings faired worse than girl-girl or boy-boy pairings, in contrast to that of others such as Littleton, Light, Joiner, Messer and Barnes (1992), Hughes, Greenhough and Laing (1992) and Light, Littleton, Messer and Joiner (1994) who found that there was no difference with regards to the educational outcome and learning in such pairs. But,

perhaps most interestingly, it has been suggested that female students gain less from mixed-gender learning (Harskamp, Ding & Suhre, 2008). Ding and Harskamp's (2006:331) research highlighted that "females' interaction content and problem-solving processes were more sensitive to partner gender than were those for males", as well as their "learning performance and knowledge elaboration" processes (Ding, 2009).

Most would acknowledge that gender is an important variable in co-operative learning, and serves to demonstrate that different communication styles can change the dynamics of interaction within a group situation (Pozzi, Healy & Hoyles, 1993; Harskhamp, Ding & Suhre, 2008). This is attributed by some, including Mercer and Littleton (2007:32), to the "individual variation amongst males and females, male students of all ages tend to dominate discussion, make more direct and directive comments to their partners, and generally adopt more executive roles in joint problem solving." Boys are not only seen to dominate discussion (Dart & Clarke, 1988), but furthermore Howe (1997:8) suggests that boys "contribute more than girls to whole-class interaction", insofar as their explanations and contributions are more likely to be extensive than that of girls (Good, Sikes & Brophy, 1973; Swann & Graddol, 1988).

This research will endeavour to explore pupils' perceptions of both mixed and single-sex pair work in an attempt to establish best practice.

Methodology

Research Design

Data was collected for the research project through a mixed methods approach, combining the use of a questionnaire with semi-structured interviews to obtain a cross-section of opinions. This was in order to triangulate the data gathered and to ensure the "trustworthiness of their interpretations" (Wilson & Stutchbury, 2009:60), by comparing both sets of responses in order to "check the validity of findings" and avoid any disparity (Denscombe, 2010:140). Furthermore, as Denscombe (2010:141) suggests, one of the main benefits of a mixed methods approach is that the "data produced by the different methods can be complementary" and go some way to provide a "more complete overview of the subject." The data gained through the quantitative method of the questionnaire could be supported by qualitative data stemming from the semi-structured interviews (Robson, 2002), as Kvale and Brinkmann (2009:117) note that interviews work well in

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"conjunction with other methods", which in turn can help to provide a more thorough study of the pupils' perceptions of mixed-sex pairs and collaboration.

Participants

The research for this project took place during February 2012, at a multiethnic, urban primary school. The study was analysing the perceptions of a Year 5 class, where the pupils were nine and ten years old. The class consisted of twelve boys and ten girls. Following permission from the Headteacher, in accordance with school policy, children were advised as to what the research would entail and letters were sent to their parents and guardians, in case they objected to their child's participation and wished to withdraw them. The children themselves were given the opportunity to opt out of participating in the study, and were informed that they could withdraw at any time during the process. With no objections from parents, and the informed consent of the children, all twenty-two children within the class became the subjects of the study and went on to complete a questionnaire on their perceptions of gender and talk.

Once this quantitative data had been gathered, the results were to be supplemented by interviewing six children of mixed ability, in mixed-sex pairs, for the qualitative data collection process. Given the focus of the study, it seemed appropriate to use mixed-sex pairs for this data, although the study could have been further extended, had time allowed, to gather the perceptions of same-sex pairs as a means of comparison.

Questionnaire

The benefit of using a questionnaire to gather data is that it allowed for a "larger number of respondents" and helped to "generate standardized, quantifiable, empirical data in the process" (Wilson & Fox, 2009:87).

In constructing the questionnaire, there were a variety of considerations that informed the design. The whole process is very difficult, and subsequently a variety of research guides were consulted during the development of the questionnaire and the questions that would then formulate the main basis of the semi-structured interviews (Robson, 2002; Drever, 2003; Munn & Drever, 2004; Kvale & Brinkmann, 2009; Wilson, 2009; Denscombe, 2010).

As Denscombe (2010:162) suggests, the questionnaire was kept as brief as possible, with the questions clearly related to the topic, and was designed to be as "straightforward and speedy as possible" to answer. Wilson and Fox (2009:88) highlighted the need for a "critical friend" to look over the questionnaire before it was administered, and my mentor was able to scrutinise it to avoid ambiguity, confusion or leading questions, as well as pilot it before use.

The children were asked to answer fifteen questions ranked on a modified form of the Likert scale. The boxes were presented in an appealing way for the age range, with faces showing an emotion replacing the text underneath the header, as can be seen in **Appendix 1**. This was a conscious choice to make the questionnaire more accessible and clear, circling the face that they most agreed with, or most closely represented their opinion.

Many of the questions were twinned, in order to ensure reliability and validity in their responses. These would further be used to inform the choice of pupils for the interviews and as a starting point for our discussion, as the questions that had been used within the questionnaire were closed questions, and therefore it "forces respondents to choose from a range of predetermined responses" (Wilson & Fox, 2009:87) and subsequently meant that the pupils could not elaborate on their response (Denscombe, 2010).

This statistical data were compiled on a database and then analysed and interpreted to highlight the preconceptions held by the children in the class with regards to their opinion of gender and learning in their classroom. This was converted into percentages to highlight the percentage of children who felt a certain way, and to ascertain differences between the perspectives of boys and girls. This data set was used to support the semi-structured interviews, and provide a context for the responses from the pupils. As the focus of this study is pupil perspectives, the emphasis placed within the paper will be on the qualitative data gleaned from the interviews, rather than the quantitative findings from the questionnaire, and this will form the focus of the discussion later.

Semi-Structured Interviews

Following the statistical analysis of the participants' questionnaires, three mixed-sex pairs were chosen to be interviewed on the basis of their ability and their responses to represent a cross-section of the class. This represents purposive sampling, a type of non-probability sampling, as the participants sampled are "representative" of the group (Winterbottom, 2009:140). The interview

process began a day after the questionnaire, with each interview taking between ten and twenty minutes each to complete.

The decision to use semi-structured interviews allowed a greater depth of analysis following on from some of the initial ideas raised within the questionnaire (Denscombe, 2010). For the interview, a list was prepared, with an "outline of topics to be covered, with suggested questions" (Kvale & Brinkmann, 2009:130), with the main benefit of semi-structured interviews being that I could reserve judgement on how closely I was to stick to the rough plan (**Appendix 2**). This allowed me the freedom to follow up lines of inquiry and thought, or modify the order and questions as appropriate as the interview progressed (Robson, 2002).

Starting with open questions allowed the pupils to elaborate on their comments and expand on each other's thinking, with probes used by the interviewer to gather more information when required (Robson, 2002; Drever, 2003). This encouraged them to "talk at some length and in their own way" (Drever, 2003:10), without "restriction on the content or manner of the reply other than on the subject area" (Robson, 2002:275), for analysis.

Analysis of the Interview Data

In analysing the data, it appeared to be most pertinent to use an inductive approach which will use "themes which emerge from the data themselves as tools for the analysis" (Evans, 2009:129). This thematic approach "is a method for identifying, analysing, and reporting patterns (themes) within data" according to Braun and Clarke (2006:6). This would allow me to pick out key recurrent themes within the data which would suggest commonly held perceptions towards mixed-sex pairs and the productivity of talk within them.

Firstly, I analysed the common themes in the transcribed data, making note of important themes that could be picked up in later discussion. In accordance with Evans (2009), I annotated the transcript with labels in square brackets, to lift the "specific points" from the text (Appendix 3).

I needed to look more closely at a variety of the utterances, and therefore the next step of coding the data involved attaching key words or themes to segments of the text for further analysis (Kvale & Brinkmann, 2009). The three most common themes, in conjunction with the aims of my research, were grouped as follows: Awareness of Gender and Talk, Types of Talk and Perceptions/Beliefs Surrounding Gender and Talk. **Appendix 4** shows the highlighted and annotated transcript, with the

coding giving a greater overview of the responses for analysis within the discussion section of this paper.

It must be noted that only parts of the interviews relevant to the discussion have been transcribed and attached as appendices or cited within the text, and this has been a conscious decision to contextualise the examples given within the discussion in this essay. All of the interviews have been transcribed naturalistically to ensure that nothing was lost in the process. Whilst this might potentially prove problematic and suggest some form of bias on the part of the researcher, it is important to note that the entire corpus of data could not be presented within this research paper. Therefore, although this represents a partial presentation of the data, it was analysed with due care and rigour as appropriate and contextualised as part of the whole. Consequently, the decision to use a thematic approach is justified in order to give a more comprehensive overview of the interview process. Full audio recordings from the interviews can be made available on request, in accordance with the Ethical Guidelines under which this research took place.

Ethics

One of the main considerations for the research project was to ensure that it was conducted in an ethical manner. This meant complying with the University of Cambridge's Ethics in Research guidelines, as well as conducting the research in accordance with the British Educational Research Association's (2011) ethical guidelines. Prior to undertaking the research, the plan and ethical considerations had been approved by my Personal Tutor.

Overarching permission had been sought from the Headteacher prior to conducting the research in line with the school's policy, and the research proposal had been discussed in detail with my mentor in order to make sure that it was appropriate and ethically sound. With the school's consent, all pupils and their parents or guardians were contacted via letter and informed of the procedure, and the pupils were informed that they had the right to withdraw at any point if they so desired should they not wish to take part (Appendix 5).

Participants in the project were informed why the data was being collected, what the data would be used for and reminded that their privacy would be respected, and that their contributions would be anonymised and confidential. The names of all children, adults and schools have therefore been anonymised for the purposes of this paper. In accordance with the Data Protection Act (1998), the

data was to be kept "no longer than necessary" and used only for the "specific purposes for which it was collected." The data has been stored securely and will be destroyed upon completion of this research.

Findings from Questionnaire

The questionnaire revealed a variety of children's perceptions of mixed-sex pair work. It will be further broken down by sex. The results have been attached to this paper **(Appendix 6)**.

Firstly, children overwhelmingly agreed that talking about their work helped them to learn, with over 63% responding favourably. A further 27% were neutral towards this, but this demonstrates that within the class there is certainly a favourable attitude towards talk, demonstrating that the members of the class see the benefits of talk in helping them to learn.

It is interesting to note that whilst the children recognise the value of talking in helping them to learn, they do not always find it useful to share their ideas with others. 41% of children stated that they were neutral with regards to sharing their ideas, but this was matched by the combined number of pupils who stated they agreed or strongly agreed with the statement. However, overall the children believed that it was useful to discuss their work before putting pen to paper, with 68% believing that this was a beneficial tool.

It is therefore evident that the children within this study recognise the value of talk and collaboration, and the benefits that this can have for their learning. Therefore, it is interesting to compare their perceptions of partners and how they feel about working with a partner of the same or the opposite sex.

When looking objectively at the data, it suggests that the children overwhelmingly enjoy working with a partner of the same sex, with 82% strongly agreeing or agreeing that they like working with a partner of the same sex. Equally important is the belief that 68% of the participants felt they worked better when paired with a partner of the same sex.

The reliability of this was to be tested by conversely asking whether the participants liked "working with a partner of the opposite sex" and whether they felt they "work better" when paired with a partner of the opposite sex. Interestingly, 54% of the participants suggested that they did not like

working with a partner of the opposite sex, whilst the figures do not corroborate exactly, still suggests that they majority do prefer working with a partner of the same sex.

Breaking this down further by sex, it suggests that, proportionately within the study, more girls than boys like working with someone of the opposite sex. Only one of the boys suggested that he liked working with girls, but there were a higher proportion of boys (25%) than girls (10%) who were neutral towards the statement.

Yet, it is perhaps most interesting to note that 59% of the participants believe they work better when paired with a partner of the same sex, compared to only 18% with one of the opposite sex, although both questions drew a proportion of neutral responses, particularly the idea of working better when paired with a partner of the opposite sex. The fact that 32% responded neutrally to this idea acknowledges that they may actually work better with a partner of the opposite sex, as opposed to the 50% who believe that they would not work better when paired with a partner of the opposite sex. It would be interesting to examine why this might be the case.

The same proportion of boys (25%) and girls (10%) think that they would work better with someone of the opposite sex. This is characterized by 50% of the boys suggesting that they strongly disagree with the assertion that they may work better with a partner of the opposite sex. It must be noted that 67% of boys and 40% of girls within the study said that they would not like to work with a partner of the opposite sex.

Therefore, whilst children do recognise the value of talk and collaboration, and the implications of this in an educational context, there is clearly a preference for working with partners of the same sex. Furthermore, the data suggests that the participants believe that they not only work better with a partner of the same sex, but they outright do not want to work with a partner of the opposite sex. The reasons behind why this may be the case will form the crux of the discussion.

Findings from the Interviews

The findings from the semi-structured interviews, contextualised by the data gleaned from the questionnaires, consider the three key research questions posed at the beginning of the paper

What are children's perceptions of talk in mixed-sex pairs?

The children suggested an acute awareness of talk within collaborative learning environments, which further extended to how they felt boys and girls interacted when working together. The participants put forward the idea that talk often centred on "emotions" and "ideas", and another child stated that "it's a way to express yourself, like what you think and how you think it." Perhaps most pertinently, all the participants recognised the immense value of talk and how it could directly impinge on their learning, but they suggested that there appeared to be a variety of problems surrounding mixed-sex partnerships.

The participants recognised that boys and girls are different, and a recurring theme was that the sexes may well not "agree" or have the same ideas as one another, leading to disputational talk that was not conducive to learning. This led to the perception that boys and girls have different ideas of how to do things – and explored in a way that suggested they recognized a fundamental difference between the sexes with regard to the way they communicate, but without linking this to educational successes of either sex (Arnot, 2006).

The participants appeared keenly aware of the benefits and problems with talk in pairs. One participant stated working in a pair could be problematic: "Because one person could decide on another thing and the other person could decide on the other thing and they could start fighting and their friendship could just go and split up" [sic]. Whilst they recognise talk can help them to learn and that it may be helpful, one participant pointed out that there may be a clash of personalities: "If you're a girl that likes sharing their ideas a lot and there's a boy that likes to share their ideas a lot it would be quite hard to work together."

This leads directly onto the contextual elements of the mixed-sex partnership. One participant suggested that productivity and collaborative work is dependent on an important variable: "It depends... if you're a girl, it depends what kind of boy you're working with." Another participant said "I think it depends on whether they're like best or like close friends or not", further

highlighting that there are clearly contextual factors that must be taken into account when assessing the suitability of mixed-sex pairs (Mercer, 2000).

One participant suggested that it was "nice to work with other genders, so you can get to know what other genders like to do" [sic]. This is obviously valuable, anticipating the likelihood of this at secondary school and almost inevitably in later life. It was suggested by several participants that working with a partner of the same sex could just lead to casual conversation on other subjects, rather than remaining on task, and "you just fly away in a different land of your own and talk about something else." This could therefore be seen as a positive element of using talk within mixed-sex pairs, in order to increase productivity.

How do they feel about working in mixed-sex pairs?

The interviewees responded favourably to the idea of working in mixed-sex pairs, however highlighted that there is a perceived social stigma in doing so willingly. One female participant said "people end up being nasty to girls if they want to go with boys or being nasty to boys if they want to go with girls." In a time of hormonal tumult and peer group pressure, many may want to work with those of the opposite gender, but it was not seen as being socially acceptable.

There was recognition by some that their relationship with a particular individual was of more relevance and concern than gender. One participant stated: "Depends who they are really... You can't just take someone random and be able to work with them. Whereas if you took someone you knew really well then you really would do well." Another highlighted that it would also depend on the pairing being fully equitable, in that each person had to do their fair share, irrespective of sex.

Furthermore, there appeared to be an equation of "gender" to "friendship". The data collected suggested that working with a partner of the opposite sex might lead to disagreements, rather than being undesirable. This contradicts the idea that children did not enjoy working in mixed-sex pairs (Light, Littleton, Bale, Joiner & Messer, 2000). This meant that working with a partner of the opposite sex through choice became an obstacle, as one boy pointed out: "I think I work better with a boy – because actually, if I had to choose, I would pick a boy, because I don't know that many girls in the class." Some participants suggested a more pragmatic approach, stating: "Yeah, you just need to make it happen – you need to stop arguing and get on with it." This, in line with the other

interviews, reiterated that there was a prevailing concern over the personality of the partner, rather than the gender.

However, there are clearly inextricable links with those of the same gender being more readily identified as friends and people desirable to work with, rather than on the basis of merit. The questionnaire and the interviews indicate a neutrality towards whether children think they learn better with a partner of the opposite sex, and therefore could be a route adopted to attempt this more, to cultivate skills with working with the opposite sex, or as a supportive and civilising influence as girls were often seen to be when paired with boys (Kenway, Willis, Blackmore & Rennie, 1998; Arnot, David, & Weiner, 1999; Warrington & Younger, 2001).

Do children feel that mixed-sex pairing is more beneficial to either sex?

Most interviewees suggested that it should theoretically be equal, with regards to the benefits for either sex – as they struggled to find reasons for why either sex should get more out of it than the other. Some participants suggested that it would depend on the effort put in and how much of an input they had, and once again, who it was.

One participant suggested that she, and many girls, were "chatterboxes", which sometimes distracted them from work. One response theorized that many conformed to roles they thought were appropriate for their gender, with "funny" being a typical male trait and "serious" being more that of a feminine trait. He implied that this may impinge on their learning, as he highlighted that they "want" to do this to be seen as accepted within the dominant culture of the classroom (Connell, 1987; Arnot & Mac an Ghaill, 2006).

Finally, close analysis of the data suggests that both gender and talk are vital influences in the classroom. The participants recognised the immense value of talk, and how beneficial pair work could be for their learning. However, it highlighted that gender is still problematic with pupils of this age where working with someone of the opposite sex has a stigma attached to it, making it undesirable to many if they are given the freedom to choose. It is important to note that whilst many prefer to work with a partner of the same sex that they acknowledge they may work better with a partner of the opposite sex. Furthermore, whilst more girls like working with someone of the opposite sex, the boys feel that they work better when paired with a girl.

Discussion

The following discussion considers the three key research questions posed at the beginning of the paper, in light of the data gathered from the questionnaire and the semi-structured interviews. This serves to summarise the overall findings of the study on the perceptions of talk and gender held by the subjects, and suggests why this may be the case.

Whilst the responses within the questionnaire highlighted that the participants generally felt they worked better with a partner of the same sex, this could be established through further testing as to whether there is any validity to this. All three pairs interviewed had no problem working together to complete their tasks, and it would be interesting to examine the extent of their friendship to establish whether that increases the amount of off-topic chatter. Their **perception of talk in mixed-sex pairs** was one that suggested it could be a double edged-sword, with both positive and negative ramifications of doing so, in terms of how it could both be constructive and distracting in equal measure.

Equally, whilst many felt positively about **working in mixed-sex pairs**, there was a distinct awareness that this was inherently problematic, due to social stigma. Consequently, providing more opportunities for mixed-sex pair work could certainly help to reduce the negative connotations of working in this manner, as clearly it is liked and seen as beneficial, contrary to common perception of children at that age, and could be used as a powerful tool to address issues of gendered behaviour and stereotypes within the classroom.

With this in mind, as to whether it is **more beneficial to either sex**, it appears to be closely linked with context, and a further investigation as to whether this occurred in specific subjects would be of merit. Contextualising this, rather than taking talk as an abstract concept, could ascertain favourable pairings in certain subjects for children and have potential benefits to the wider field with regards to achievement. Further to this, there is the possibility that children conflate "talk" with "work", and therefore their productivity may be lower than first thought – it may therefore be worth measuring a task with a tangible outcome to investigate if this is the case.

Reflections

The mixed-methods approach adopted for this research paper seemed the most appropriate way to tackle the analysis of pupils' perceptions, triangulating the data to give it a greater validity. However, there are a variety of alternate ways in which the data collection could have been done.

The questionnaire, whilst effective and interesting, could have been more extensively piloted. It would have been interesting to have compared perceptions with the parallel class at the same school, to see if they correlated, and to establish whether they were highly indicative of the classroom environment.

The use of the "emoticons" seemed to work well and be easily understood by pupils of all abilities. Lengthening the questionnaire would have been possible; however it was important to strike a balance between an appropriate length and eliciting their frank and immediate responses (Denscombe, 2010). It would be interesting to vary the style of questionnaire, perhaps using open rather than closed questions, in order to analyse a greater qualitative output and allow for children to expand upon their views and explain their opinions.

This was one of the main reasons for using semi-structured interviews alongside the questionnaire. One of the benefits of this style of interviewing is its flexibility, which, as Robson (2002) and Wilson (2009) suggest, is particularly appropriate within the primary classroom, rather than the constraints that closed, structured questions can place on an interview. With particular emphasis on making what Drever (2003) describes as a "formal encounter" less intimidating, it was important to ensure their comfort during the interview process. The interviews were therefore conducted in the familiar environment of a teaching assistant's classroom.

Combining the data from both collection methods could provide a more comprehensive overview of the perceptions of the participants, giving greater validity and credence to this study. It would be preferable to expand the research further, but given the time constraints placed upon this project, it would have been unfeasible to expand the research given the three half-days available. Equally, interviewing more pupils within the class, and potentially expanding it to a cross-phase comparison, would be a further ways to expand the study, and it would be interesting to compare and contrast the perceptions of pupils in different year groups at different stages of maturity and development.

Implications for Development

Following the conclusion of this research project, there are a variety of implications I would like to consider for my own practice. The project has focused my attention on the problem of gender within schooling, and consequently I would endeavour to adapt my practice to reduce any symptoms of gender inequality within the classroom.

Furthermore, the immeasurable value of talk in pair work as a tool for developing and expanding the learning of all children has been firmly highlighted within this project. Whilst talk may not be able to alleviate all issues surrounding gender, it can certainly be a tool to empower the children within the classroom to express and discuss their ideas eloquently and without fear of being told that they are wrong.

I have made particular note of the rules for talk that were firmly established and embedded within the class that I worked with: the importance of "listening, not just hearing"; maintaining eye contact and asking questions to show you are paying attention, cannot be understated. These rules remind children to engage properly with their partner, and can be used to develop confidence with speaking and presentation, which has a myriad of cross-curricular links as well as being invaluable in future life. I would like to develop a set of "Rules for Talk" in conjunction with my class, so that they could be displayed and adhered to at all times, and all be active agents in maintaining high standards of conduct whilst engaged in dialogue.

As a result of my research, I have learnt that it is worth giving children a few moments before starting their work to discuss their ideas with a partner. Talking through their ideas may in turn help to clarify what they wish to achieve and address any misconceptions with the task in question.

It is clear that there are distinct benefits to talking and working in pairs, whether with mixed or same sex partners. Varying talking partners gives a variety of social and learning experiences according to Clarke (2008), who suggests that this should be done frequently for best effect. Other concepts, such as Lyman's (1981) 'Think, Pair, Share' can be used to reduce the potential embarrassment that an individual may feel from getting something wrong, as it has been mediated by the pair and is a collaborative effort. It was interesting to note that the class in which this study took place suggested that "Good try" was used rather than "No", if pupils were questioning one

another – which led to a far more positive atmosphere, and would certainly be something I intend to adopt for my own practice.

Equally, mixed-sex pairs provide an opportunity to gain a different perspective from the opposite gender. There are still some issues to consider relating to gender, and therefore addressing issues (real or perceived) of gender inequality through practice appears to be an appropriate resolution. It can help to endow children with communication and collaboration skills that they will use throughout their life. Dialogue is fundamental to the learning process and ultimately aids internalisation and self-regulation, and therefore acknowledged as a key part of the meta-cognitive process of thinking and learning, and a crucial element of good practice.

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Appendix 1 – Sample Questionnaire

Talking about Talk

Please circle your gender and fill in the following.

- 1. I am a boy / girl
- 2. I am _____ years old

Please read each statement below carefully. For each statement please say whether you strongly agree, agree, are neutral, disagree or strongly disagree. Circle the face that best matches how you normally feel about it.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Talking about my work helps me to learn		(\cdot, \cdot)			
I find it useful to share ideas with others		(· · · ·		
I find it useful to discuss work before I write it down				(\cdot, \cdot)	

I like working with a partner of the same sex	$\overline{(\cdot,\cdot)}$	(\cdot)	·	$\begin{array}{c} \hline \\ \hline \\ \hline \\ \end{array}$	(
I work better when I am paired with a partner of the same sex	(\cdot)	(\cdot)	$\underbrace{\cdot}$	$\underbrace{(\cdot)}_{\cdot}$	
I like working with a partner of the opposite sex	(\cdot)	(\cdot)	$\underbrace{(\cdot \ }$	$\underbrace{)}_{\cdot}$	$(\mathbf{\hat{\mathbf{x}}})$
I work better when I am paired with a partner of the opposite sex	$\left(\begin{array}{c} \cdot \\ \cdot \end{array}\right)$	$\left(\begin{array}{c} \cdot \\ \cdot \end{array}\right)$	((\mathbf{y})	(ڳ) (ک
I always listen to my partner's views	(\cdot)	(\cdot)		$\underbrace{(\cdot)}_{(\cdot)}$	
I always respect my partner's views	(\cdot)	(\cdot)	$(\cdot \)$	(\cdot)	
When working with a partner, we work together to complete the task		(\cdot)		$\underbrace{\begin{array}{c} \bullet \\ \bullet \end{array}}_{\bullet}$	
When working with a partner, we do not always complete the task		(\cdot, \cdot)	· · ·	$\begin{array}{c} \hline \\ \hline \\ \hline \\ \end{array}$	(

When I work in a pair, I talk the most		·		
When I work in a pair, my partner talks the most	(· · ·	$\underbrace{(1,2)}_{1}$	
I find it harder to concentrate when I work in a pair	(· · · ·	$\underbrace{(\cdot)}_{(\cdot)}$	
I find it harder to concentrate when everyone is talking	(· · ·	(\cdot)	

Appendix 2 - Semi-Structured Interview Questions

To start:

As I said I am interested in the different types of talk that goes on in schools. Is talking something you think about in school? Is it something you are aware of when you are working? Is it something that can cause you problems?

What are children's perceptions of talk in mixed-sex pairs?

What are children's perceptions of talk in single-sex pairs?

Do children believe they benefit from mixed-sex partnerships as opposed to working in same-sex partnerships? / Do you think you work better with someone of the same sex, or someone of the opposite sex?

How do they feel about working in mixed-sex pairs?

Do you like working in mixed-sex pairs?

Do children believe they benefit from paired talk?

Do children believe that one sex in a mixed-sex pairing benefits more?

Do children think that in mixed-sex pairs, one sex dominates the conversation?

What are the most common types of talk (either disputational, cumulative or exploratory) in learning partners?

Finally:

Is there anything else you want to say about this topic, that I haven't asked you?

Is there anything else that you want to ask me?

Appendix 3 - Common Themes – Analysis of Data for "Specific Points" in the text.

Dyad 1 - D&T:

R: Is it something you are aware of when you work with someone else? Do you think about how you talk to that person?

D: You have to think about how you act [Action] when you speak [Awareness]

R: Do we think that talk can cause problems?

D: Yes, because if you don't act in the right way you can say wrong things to hurt people's feelings [Awareness – Hurtful]

T: Erm yeah, Talk can hurt like people in some ways like say someone put like a card down on a table and the other person didn't think it'd be like that someone would just say nah that's a rubbish idea **[Disputational]**

Children decided on the way they were going to order the percentages – decided on a method together and went and did it. Talked with one another as to where they went, made a decision for each one

D: Yeah, it really helped cos you need to like co-operate [Dialogue]

R: Yes

T: With each other so then you would have an idea about what order they would go in so then you'd have to come to an agreement [Agreement – Collaborative]

T: It does help **[Value]**– if you weren't talking you'd put it in random places **[Organisational]** and if you weren't talking your partner wouldn't say anything if it was wrong **[Completing the Task]**

Raised the importance of body-language

R: Do we think we work better with someone of the opposite sex? And we are thinking generally, we're thinking all the time - not just this instance, because we worked very well together, but generally, do we think we work better with someone of the opposite sex?

T: Kind of – sometimes

D: depends on the situation you are in **[Context]**, if you're in a situation where you can't like it's like a really hard one **[Task dependant]** and you're working with the opposite gender you can't really come to an agreement **[Disputational Talk]** cos they'd want to do one thing and you want to do another thing **[Differences between genders]**

R: Do we prefer working with people of the same gender?

T: Sometimes, because when you work with your friends you can go into another conversation **[Distraction]**

D: It is nice to work with someone of the same gender, but it is nice to work with other genders, so you can get to know what other genders like to do [Variety – Alternate perspectives]

R: Do we think we work better with someone of the same sex or same gender?

D: No, I don't think it's really good when... Going back to S's point, you just fly away in a different land of your own and talk about something else **[Distraction]**

D: It also depends on how they cope with behaviour as well [Behaviour - Character]

R: When you work with someone of the opposite gender, do you think you benefit more or that they benefit more?

D: Both the same really **[Equality]**, because, you'd be learning stuff from them and they'd be learning stuff from you – so you'd both basically have the same amount of learning, but it would just be different things you're learning **[Two way process]**

R: Who talks more?

T: Kinda like the same, I think [Equal]

D: Same...[Equal] but depends, on what they know about stuff, [Context – Individual Variance] but basically, it's the same as the boys can learn from the other boys and the girls can learn from the other girls [Dialogue – Two Way Process]

D: Basically, it actually depends on what the situation is **[Context]**, because you can agree on this cos it doesn't matter what you do, but on other things, say on about, on your favourite singer, erm you're in a pair and had to agree on one you liked, then the, if you, if you're working with a girl and you're a boy it depends on if you like the same singer **[Individual Differences]** or if you just argue over which one you want **[Hard to agree/Disputational]**

Issues raised:

Behaviour

How you speak to people - take into account feelings

Working together

Importance of body language

Depends on situation/context

Idea that genders have different ideas of how to do things/complete tasks

Equation of "gender" to "friendship" - would be interesting to probe that further

Important to note that you can work with others, improve work with others – more like real life

Disputational talk

Dyad 2 - C&S:

R: Is talking something you think about when you are in school?

S: Yes. [Current Discourse] I think talking is good because if you couldn't talk then no one would be able to share their emotions or feelings with anybody... or their ideas [Talk Important]

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R: So talking is an excellent way of sharing how we feel and our ideas. Would you like to expand on that C?

C: if you have a thought, and you're like really nervous, and like, and you want other people to help you, you can tell them straight away and so they can just help you get better and like not nervous and take the fear off you **[Expression – variety of functions]**

R: But you are aware that you talk, or want to talk, when you are working?

S: It is easier to talk when you work [Helpful] cos then something that you're bursting to say to someone about your lesson [Important] – then you can just say it and concentrate more [Helps Concentration]

R: If we're not talking about the learning or the topic, can it be a distraction?

C: It would ... If you had the answer in your head and you are talking about something else like Dr. Who or Star Wars, it would just suddenly come off your head and go straight onto Star Wars or Dr. Who [Awareness of the negative aspect of talk]

R: Do you think [talk] it can be problematic when working in a pair or with a friend? So if we were working together on this, do you think it could be problematic?

C: Could be [Awareness of problems]

R: Why do you think it could be?

C: Because one person could decide on another thing and the other person could decide on the other thing and they could start fighting and their friendship could just go and split up **[Disputational nature of talk]**

Argue over the work we're doing

R: So, what do we think about working in a pair – a boy and a girl?

C: Err .. It depends... if you're a girl, it depends what kind of boy you're working with. **[Depends on the partner]** Cos if you're... If you're a girl that likes sharing their ideas a lot and there's a boy that likes to share their ideas a lot it would be quite hard to work together **[Individual Differences]**

But if you're a girl who doesn't like sharing their ideas much and a boy that does – then that would work **[Depends on participation]**

C: I think it depends on whether they're like best or like close friends or not [Dependent on friendships]

On asked whether they would rather be paired with someone of the opposite or the same gender

S: Well it's 50/50. Because as I said...it depends on what type of person the other person is. **[Dependent on the type of person]** Cos I don't really like working with girls much cos they argue a lot with me because I'm a girl and because all the girls in the class don't like other people sharing their ideas so we end up arguing a lot **[Disputational talk – can occur in both same and mixed-sex pairings]**

C: I would prefer to work with a girl because I know like boys a lot and er I keep er I keep going with them a lot and I just want a change for once and see how girls react and such [Preference for a variety, working with the opposite sex, idea that they may be different]

S: I'd rather work with girls – I work better with girls. **[Indicative of belief]** Boys are bossy. Except for some boys **[Generalisations]**

R: Do you think better when you work with a boy or a girl?

C: I think I work better with a boy – because actually, if I had to choose, I would pick a boy, because I don't know that many girls in the class **[Depends on friendships rather than gender]**

R: But do we think, that boys and girls, should be able to work with boys or girls and get the same learning done? Do we still think that we can work really well together and it doesn't matter about gender?

C: It depends [Variable]

S: Yeah – er, because, I do like going with boys but I don't really like going with them anymore because people keep being nasty... [Social Stigma] cos people who don't like being being partner

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with boys and people end up being nasty to girls if they want to go with boys or being nasty to boys if they want to go with girls [Frowned upon – peer pressure]

R: When boys and girls work together, who do you think benefits more from working in a pair? Do you think the boy gets more out of it or do you think the girl does? It doesn't have to be about you as an individual, more of a general comment.

S: I think boys get more, cos boys are more smarter most of the time [Intelligence - Generalisation]

R: Oh that's interesting – why do you say that S?

S: Because... loads of boys think they... think girls are smart because they just like getting attention and the same with girls but I think... I think personally, honestly, that boys are smarter **[Intelligence]**

R: What about you C? What do you think?

C: S, I'm not disagreeing with you, but in my opinion, I would think that girls are like smarter because they've got more stuff going on in their head and stuff **[Intelligence - Misconception]**

Suggested amounts of talk were pretty equal.

R: If we're having a conversation, with a boy and a girl in the pair, who do you think talks more in the conversation? Do you think the boy talk more or the girl talks more in general?

S: Boys talk more because they've got a lot to say same with girls both of them really talk a lot cos I admit I'm quite a chatterbox most of the girls are quite chatterbox same with the boys [Similar characteristics – desire to talk]

R: Right okay, so it is probably quite equal, is that right S? What about you C?

C: Erm I 'm agreeing with S because like everyone like the boys want to be like funny and stuff and the girls want to be like serious so the girls will be blah-blah-blah and the boys will be like blah-blah-blah-blah [Perceptions of serious/humorous nature dependent upon gender]

Issues raised:

Nerves

Feeling/emotions

Sharing things

Helping you to concentrate and focus

Distract you

Acknowledge it could cause problems

Contextualised

Disputational talk

Notion of a "geek" – interested in subject

Difficulty without talk –

People can

Boys are "smarter"

Depends on input as to a concrete output

Dyad 3 - A&B

R: What do we think about talk then A?

A: It's... it's a way to express yourself, like what you think and how you think it [Purpose of talk]

With regards to whom they would prefer to work with:

A: Depends who they are really... it really does [Dependent on person, rather than gender] You can't just take someone random and be able to work with them. Whereas if you took someone you knew really well then you really would do well [Importance of friendship/prior knowledge of partner]

B: But like you should pick someone who you knew who won't like mess about and talk something not like unnecessary or stuff like that **[Behaviour]**

R: Do we think that if a boy and a girl work together in a partnership, okay, like we've just done now, that either the boy or the girl gets more out o working together. So do we think A got more out of that, or B got more out of that, in this example?

A: Erm, I would have thought that we have both got the same out of it, there is... [Equality]

R: Do you agree with that B?

B: Yeah I agree – 100% about that [Equality - Collaboration]

R: Fantastic - And do you think that most of the time people would say the same – that's the way it works?

B: Well yeah

A: Yeah really but it might depend on who you're working with and how much each person does [Depends on person and contribution]

R: Were you going to say something B?

B: Yeah it doesn't really... just... cos some people like if they were girl and girl would sometimes be fighting and like saying "oh this one goes there, this one goes there, this one goes there, erm if it was a boy, it could still be the same [Could still be problems in same-sex partnerships]

R: So we think that sometimes it doesn't matter what gender the other person is, there can still be problems. Or you can still work really well.

B: Yeah, you just need to make it happen – you need to stop arguing and get on with it [Positive – pragmatic]

R: Do we think that if a boy and a girl work together, that one of the sexes talks more than the other?

B: If they were like listening... then yeah... [Perception]

A: Very rarely, but maybe [Perception]

Issues raised:

Should be equal - no reason why anyone should get more out of it

Sometimes it doesn't matter what gender the person is - just the learning

Depends who you're with

Turn-based

Importance of rules for talk

Appendix 4 - Coding – Highlighting Themes within the Text

Key:

Awareness of Gender and Talk

Types of Talk

Perceptions/Beliefs Surrounding Gender and Talk

Dyad 1 - D&T:

R: Is it something you are aware of when you work with someone else? Do you think about how you talk to that person?

D: You have to think about how you act [Action] when you speak [Awareness]

R: Do we think that talk can cause problems?

D: Yes, because if you don't act in the right way you can say wrong things to hurt people's feelings [Awareness – Hurtful]

T: Erm yeah, Talk can hurt like people in some ways like say someone put like a card down on a table and the other person didn't think it'd be like that someone would just say nah that's a rubbish idea [Disputational]

Children decided on the way they were going to order the percentages – decided on a method together and went and did it. Talked with one another as to where they went, made a decision for each one

D: Yeah, it really helped cos you need to like co-operate [Dialogue]

R: Yes

T: With each other so then you would have an idea about what order they would go in so then you'd have to come to an agreement [Agreement – Collaborative]

T: It does help [Value]– if you weren't talking you'd put it in random places [Organisational] and if you weren't talking your partner wouldn't say anything if it was wrong [Completing the Task]

Raised the importance of body-language

R: Do we think we work better with someone of the opposite sex? And we are thinking generally, we're thinking all the time - not just this instance, because we worked very well together, but generally, do we think we work better with someone of the opposite sex?

T: Kind of – sometimes

D: Depends on the situation you are in [Context], if you're in a situation where you can't like it's like a really hard one [Task dependant] and you're working with the opposite gender you can't really come to an agreement [Disputational Talk] cos they'd want to do one thing and you want to do another thing [Differences between genders]

R: Do we prefer working with people of the same gender?

T: Sometimes, because when you work with your friends you can go into another conversation [Distraction]

D: It is nice to work with someone of the same gender, but it is nice to work with other genders, so you can get to know what other genders like to do [Variety – Alternate perspectives]

R: Do we think we work better with someone of the same sex or same gender?

D: No, I don't think it's really good when... Going back to S's point, you just fly away in a different land of your own and talk about something else [Distraction]

D: It also depends on how they cope with behaviour as well [Behaviour – Character]

R: When you work with someone of the opposite gender, do you think you benefit more or that they benefit more?

D: Both the same really [Equality], because, you'd be learning stuff from them and they'd be learning stuff from you – so you'd both basically have the same amount of learning, but it would just be different things you're learning [Two way process]

R: Who talks more?

T: Kinda like the same, I think [Equal]

D: Same...[Equal] but depends, on what they know about stuff, [Context – Individual Variance] but basically, it's the same as the boys can learn from the other boys and the girls can learn from the other girls [Dialogue – Two Way Process]

D: Basically, it actually depends on what the situation is [Context], because you can agree on this cos it doesn't matter what you do, but on other things, say on about, on your favourite singer, erm you're in a pair and had to agree on one you liked, then the, if you, if you're working with a girl and you're a boy it depends on if you like the same singer [Individual Differences] or if you just argue over which one you want [Hard to agree/Disputational]

Dyad 2 - C&S:

R: Is talking something you think about when you are in school?

S: Yes. [Current Discourse] I think talking is good because if you couldn't talk then no one would be able to share their emotions or feelings with anybody... or their ideas [Talk Important]

R: So talking is an excellent way of sharing how we feel and our ideas. Would you like to expand on that C?

C: If you have a thought, and you're like really nervous, and like, and you want other people to help you, you can tell them straight away and so they can just help you get better and like not nervous and take the fear off you [Expression – variety of functions]

R: But you are aware that you talk, or want to talk, when you are working?

S: It is easier to talk when you work [Helpful] cos then something that you're bursting to say to someone about your lesson [Important]– then you can just say it and concentrate more [Helps Concentration]

R: If we're not talking about the learning or the topic, can it be a distraction?

C: It would ... If you had the answer in your head and you are talking about something else like Dr. Who or Star Wars, it would just suddenly come off your head and go straight onto Star Wars or Dr. Who [Awareness of the negative aspect of talk]

R: Do you think [talk] it can be problematic when working in a pair or with a friend? So if we were working together on this, do you think it could be problematic?

C: Could be [Awareness of problems]

R: Why do you think it could be?

C: Because one person could decide on another thing and the other person could decide on the other thing and they could start fighting and their friendship could just go and split up [Disputational nature of talk]

Argue over the work we're doing

R: So, what do we think about working in a pair – a boy and a girl?

C: Err .. it depends... if you're a girl, it depends what kind of boy you're working with. [Depends on the partner] Cos if you're... If you're a girl that likes sharing their ideas a lot and there's a boy that likes to share their ideas a lot it would be quite hard to work together. [Individual Differences] But if you're a girl who doesn't like sharing their ideas much and a boy that does – then that would work [Depends on participation]

C: I think it depends on whether they're like best or like close friends or not [Dependent on friendships]

On asked whether they would rather be paired with someone of the opposite or the same gender

S: Well it's 50/50. because as I said...it depends on what type of person the other person is. [Dependent on the type of person] Cos I don't really like working with girls much cos they argue a lot with me because I'm a girl and because all the girls in the class don't like other people sharing their ideas so we end up arguing a lot [Disputational talk – can occur in both same and mixedsex pairings]

C: I would prefer to work with a girl because I know like boys a lot and er I keep er I keep going with them a lot and I just want a change for once and see how girls react and such [Preference for a variety, working with the opposite sex, idea that they may be different]

S: I'd rather work with girls – I work better with girls. [Indicative of belief] Boys are bossy. Except for some boys [Generalisations]

R: Do you think better when you work with a boy or a girl?

C: I think I work better with a boy – because actually, if I had to choose, I would pick a boy, because I don't know that many girls in the class [Depends on friendships rather than gender]

R: But do we think, that boys and girls, should be able to work with boys or girls and get the same learning done? Do we still think that we can work really well together and it doesn't matter about gender?

C: It depends [Variable]

S: Yeah – er, because, I do like going with boys but I don't really like going with them anymore because people keep being nasty... [Social Stigma] cos people who don't like being being partner with boys and people end up being nasty to girls if they want to go with boys or being nasty to boys if they want to go with girls [Frowned upon – peer pressure]

R: When boys and girls work together, who do you think benefits more from working in a pair? Do you think the boy gets more out of it or do you think the girl does? It doesn't have to be about you as an individual, more of a general comment.

S: I think boys get more, cos boys are more smarter most of the time [Intelligence - Generalisation]

R: Oh that's interesting – why do you say that S?

S: Because... loads of boys think they... think girls are smart because they just like getting attention and the same with girls but I think... I think personally, honestly, that boys are smarter [Intelligence]

R: What about you C? What do you think?

C: S, I'm not disagreeing with you, but in my opinion, I would think that girls are like smarter because they've got more stuff going on in their head and stuff [Intelligence - Misconception]

Suggested amounts of talk were pretty equal.

R: If we're having a conversation, with a boy and a girl in the pair, who do you think talks more in the conversation? Do you think the boy talk more or the girl talks more in general?

S: Boys talk more because they've got a lot to say same with girls both of them really talk a lot cos I admit I'm quite a chatterbox most of the girls are quite chatterbox same with the boys [Similar characteristics – desire to talk]

R: Right okay, so it is probably quite equal, is that right S? What about you C?

C: Erm I 'm agreeing with S because like everyone like the boys want to be like funny and stuff and the girls want to be like serious so the girls will be blah-blah-blah and the boys will be like blah-blah-blah-blah [Perceptions of serious/humorous nature dependent upon gender]

Dyad 3 - A&B

R: What do we think about talk then A?

A: It's... it's a way to express yourself, like what you think and how you think it [Purpose of talk]

With regards to who they would prefer to work with:

A: Depends who they are really... it really does. [Dependent on person, rather than gender] You can't just take someone random and be able to work with them. Whereas if you took someone you knew really well then you really would do well [Importance of friendship/prior knowledge of partner]

B: But like you should pick someone who you knew who won't like mess about and talk something not like unnecessary or stuff like that [Behaviour]

R: Do we think that if a boy and a girl work together in a partnership, okay, like we've just done now, that either the boy or the girl gets more out o working together. So do we think A got more out of that, or B got more out of that, in this example?

A: Erm, I would have thought that we have both got the same out of it, there is... [Equality]

R: Do you agree with that B?

B: Yeah I agree – 100% about that [Equality - Collaboration]

R: Fantastic - And do you think that most of the time people would say the same – that's the way it works?

B: Well yeah

A: Yeah really but it might depend on who you're working with and how much each person does [Depends on person and contribution]

R: Were you going to say something B?

B: Yeah it doesn't really... just... cos some people like if they were girl and girl would sometimes be fighting and like saying "oh this one goes there, this one goes there, this one goes there, erm if it was a boy, it could still be the same [Could still be problems in same-sex partnerships]

R: So we think that sometimes it doesn't matter what gender the other person is, there can still be problems. Or you can still work really well.

B: Yeah, you just need to make it happen – you need to stop arguing and get on with it [Positive – pragmatic]

R: Do we think that if a boy and a girl work together, that one of the sexes talks more than the other?

- B: If they were like listening... then yeah... [Perception]
- A: Very rarely, but maybe [Perception]

Appendix 5 – Letter to Parents/Guardians – Anonymised

Dear Parents,

This half-term, Class 5 will be joined by two trainee teachers, Miss G and Mr H, who have come to us from the University of Cambridge. Whilst working with us, they will be undertaking individual research projects, and would like to ask permission for your children to participate in this. Miss G is looking into the role of singing within the Primary School Classroom, and Mr H is investigating the role of gender in paired talk.

Children will be asked to complete a questionnaire in order to express their opinions and may be selected take part in an individual or group interview. The results will be anonymised and no names will be used. If you are not happy for your child to participate in these projects, please sign this form and return it to Miss H. If you have any questions, please do not hesitate to contact us; we should be delighted to speak with you.

Kind Regards,

Miss G and Mr H $\,$

I would rather that my child does not participate in the research projects.

Name of Child

Signature of Parent/Guardian

Results Boys	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Talking about my work helps me to learn	4	4	2	1	1	12
I find it useful to share ideas with others	3	2	6		1	12
I find it useful to discuss work before I write it down	6	3	1	1	1	12
I like working with a partner of the same sex	7	2	1		2	12
I work better when I am paired with a partner of the same sex	4	1	4		3	12
I like working with a partner of the opposite sex	1		3	2	6	12
I work better when I am paired with a partner of the opposite sex	3		4	2	3	12

Appendix 6 – Results of the Questionnaire

I always listen to my partner's views	4	5	3			12
I always respect my partner's views	4	5	2	1		12
When working with a partner, we work together to complete the task	6	1	3		2	12
When working with a partner, we do not always complete the task	2	1	8	1		12
When I work in a pair, I talk the most	2	2	6		2	12
When I work in a pair, my partner talks the most	2	3	7			12
I find it harder to concentrate when I work in a pair	4	1	5		2	12
I find it harder to concentrate when everyone is talking	7	2			3	12

Results Girls	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Talking about my work helps me to learn	4	2	4			10
I find it useful to share ideas with others	1	3	3	2	1	10
I find it useful to discuss work before I write it down	2	4	4			10
I like working with a partner of the same sex	6	3	1			10
I work better when I am paired with a partner of the same sex	6	2	1	1		10
I like working with a partner of the opposite sex	3	2	1	1	3	10
I work better when I am paired with a partner of the opposite sex		1	3	3	3	10

I always listen to my	4	5		1		10
partner's views	4	5		1		10
I always respect my partner's views	5	4	1			10
When working with a partner, we work together to complete the task	5	2	3			10
When working with a partner, we do not always complete the task	2		5	2	1	10
When I work in a pair, I talk the most		1	5	3	1	10
When I work in a pair, my partner talks the most	1	1	5	3		10
I find it harder to concentrate when I work in a pair	3		1	3	3	10
I find it harder to concentrate when everyone is talking	5	2			3	10

Results Combined	Strongly	Agree JoT	. Neutral TER Vol. 4 (2	Disagree	Strongly		
120	Agree				Disagree	© Chr	is Hussey, 2012

Talking about my work helps me to learn	8	6	6	1	1	22
I find it useful to share ideas with others	4	5	9	2	2	22
I find it useful to discuss work before I write it down	8	7	5	1	1	22
I like working with a partner of the same sex	13	5	2	0	2	22
I work better when I am paired with a partner of the same sex	10	3	5	1	3	22
I like working with a partner of the opposite sex	4	2	4	3	9	22
I work better when I am paired with a partner of the opposite sex	3	1	7	5	6	22
I always listen to my partner's views	10	3	1	0	22	

I always respect my partner's views	9	9	3	1	0	22
When working with a partner, we work together to complete the task	11	3	6	0	2	22
When working with a partner, we do not always complete the task	4	1	13	3	1	22
When I work in a pair, I talk the most	2	3	11	3	3	22
When I work in a pair, my partner talks the most	3	4	12	3	0	22
I find it harder to concentrate when I work in a pair	7	1	6	3	5	22
I find it harder to concentrate when everyone is talking	12	4	0	0	6	22