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A critical investigation of whether seating students by gender affects participation in discussion-based learning: a case study with a Year 8 class studying death

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Abstract

This case study looks at the effects of classroom seating plans on discussions in a series of Year 8 lessons about death. It investigates actual student participation for recall and analytical questions; perceived student participation for recall and analytical questions; and the effect of each seating plan on student enjoyment. The research uses non-participant observations, questionnaires, and informal conversation interviews to make its findings, and is able to make some observations about general trends in this class. The findings show that there is only a small difference in participation between boys and girls, although participation in general changes depending on the seating plan. The findings also show that there is little difference by gender in the desire to participate in the lesson. The analysis of the findings attempts to explain why there is little difference between gender participation, and why participation in general changes according to seating, based on the preferred friendship groups of students outside the classroom, and students' own ideas about confidence. The research also shows that there is a direct link between enjoyment of a lesson and participation in it, and suggests that this is a valuable conclusion for a classroom practitioner hoping to get the best out of all students.

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Introduction

This research looks at the seating plan of a classroom according to gender for discussion-based lessons with a Year 8 class. The class comprises fourteen male and seventeen female students, aged twelve and thirteen, of middle ability in relation to the rest of the year group, including two with mild special educational needs, and one with both special educational needs and behavioural and emotional difficulties. The school is an 11-16 community college with a small RE department, and RE is a compulsory subject up to the end of Key Stage 3. It is offered as a GCSE at Key Stage 4, but is not widely taken. My research took place in the context of the current national questions about the place of RE, as well in context of school-related issues.

My interest in gender-related participation in classroom discussions stemmed from my awareness of my limited experience of the issue. Having attended a single-sex school, and having been placed in an all girls school for my first professional placement, I was conscious that the mixed-sex classroom would be a new environment for me, and I was anxious to find out as much about it as possible, in order to teach in the most successful way. Based on my reading, I decided to split my research into three questions: two to inform my teaching, and to help me understand the students in the class, and one to allow me to understand what I was seeing within a wider context, such as that of the school.

The first question I decided to examine was what the effect of a seating plan actually was on participation in discussion according to gender. I also took into account when looking at this question whether or not there was a difference in participation depending on the type of questions brought up. I hoped that this would allow me to understand what kind of things I needed to do in a mixed-sex classroom in order to make sure that every student took part in the lesson. My second research question complemented this, as it looked at what the perceived effect of a seating plan was on participation; in other words what the students themselves thought about their participation in the lesson. This, I hoped, would allow me to understand further the motivation behind students'

desire to participate, and would help inform my future planning and practise. My third research question took into account my own interest in what was happening in the classroom, and fed into one of the dominant interests in the RE department at school, based on recent government initiatives. Although RE is technically a requirement until the end of Key Stage 4, at this school it is at the moment offered as an optional GCSE. Although at the moment there is a decent uptake of RE at GCSE, the concern is that those who may have chosen only one Humanities subject will now choose to take either History or Geography instead, in order to gain the English Baccalaureate qualification. My third question, therefore, asked what the effect of the seating plan was on the enjoyment the students had in the lesson, as whether or not they enjoyed the classes will surely have an effect on whether or not they choose to continue with the subject in the future, and could help to inform the planning of the department, or indeed, any other subject that features discussion in class.

Review of the Literature

My case study was the result of an interest that rose out of personal experience, anecdotal evidence, and close reading of existing research. What follows is a brief explanation of the literature about the importance of discussion, the importance of engagement and how discussion can help engagement, the enjoyment that can come from engagement, as well as some previous research about gender participation. These factors led me to choose this project, and will hopefully give enough background information to understand my findings from the study.

Throughout my teaching practice, I had noted that not every student participated voluntarily in class discussions. Although it is sometimes difficult to say as a teacher that those who do not speak out are not learning - as it may well be the case that they prefer to remain silent, listen to what others have to say, decide what they think on their own, and never have to subject their ideas to the scrutiny of the other members of their class - I found it frustrating to have to keep prompting them for answers. In terms of being able to assess progress, it is clearly easier as a teacher to hear ideas from class members as discussions are taking place, in order to be able to assess learning as it happens. In addition, RE is not a single-disciplinary subject. I believe that the purpose of RE goes further than to simply teach students about world religions or ask them to think about key questions. It should, as is the case in many subjects, be encouraging students to develop all kinds of skills,

such as in literacy or debating, and as the topics learnt about often invite opinion, it seems that it is perfectly placed to enable students to learn valuable discussion skills.

It has been suggested that while RE can help the development of discussion skills, the inverse is also true: discussion in a classroom is a valuable tool for religious education. James Dillon gives several reasons for using discussion in the classroom, including how it helps students to “learn the subject matter ... [and] learn how to discuss”, as well as resolving matters or making them more satisfying (Dillon, 1994: 108-110). Julia Ipgrave (2001), through her research, has set out several areas within RE in which classroom discussion is beneficial. She suggests that one benefit “is that it values the children’s background” (p. 14). In order to make students feel comfortable in the class, and feel that their opinions count, this is clearly important. In addition, discussion “gives children a forum for expressing and sorting out problems and puzzles about religious identity” (p.15). If one of the tasks of RE is to help students develop religious literacy, then the value that discussion places on “an intellectual response to religion and life’s ‘big questions’”, and the way it “develops the skills needed for the exploration of religious concepts and positive responses to the challenges of religious diversity and change” (p.15) should demonstrate how important it is in a classroom. Furthermore, Ipgrave’s research shows that classroom discussion can help aid, the intellectual, moral, social and personal development of students. It allows students to “engage rationally with quite difficult concepts ... give[s] them a chance to reflect in more depth on the ethical issues that concern them ... enhance[s] trust ... equality ... inclusion ... [and] collaborative thinking ... [and] reveal their fuller potential to themselves and others” (pp.16-18). It is clear, therefore, why classroom discussion is important, and why finding out how to encourage students to do so is a matter of research interest.

It is easy to see that those students who are participating in a lesson are also engaged by it. As previously mentioned, non-participation does not necessarily mean non-engagement, but it does mean that the student in question is engaged to a lesser degree. The question of engagement through participation is central to this case study. According to Richard VanDeWeghe (2009, p.6), “engaged learning goes beyond superficial knowledge, such as memorizing facts or filling in forms, to more complex, more compelling meaning. It is engagement with the subject of a lesson that allows a student to develop what Albert Bandura would term ‘self-efficacy’, and it is partly through this that a student becomes critically literate in RE. Indeed, Polly Fassinger (1995, p.83) notes that “student participation seems to nurture critical thinking [and] facilitating students’ willingness to raise questions or offer comments in class is likely to enhance their intellectual development”. Bandura

(1997: 175) remarks that “cooperative structures, in which members encourage and teach one another, generally promote higher performance attainments than do ... individualistic ones”, and this should be enough to begin to argue for the importance of engagement in the classroom through participation in discussion as a tool for learning. If this is not enough, we can turn to the work of Vygotsky, who highlighted the importance of reflection to allow for the evolution of understanding. His ideas about scaffolding, where a more expert learner can provide support to help a classmate achieve what is just out of reach (Smidt, 2009, page 87) finds a home in the use of engagement through discussion. This brief outline of why engagement is important in the classroom sets the scene for some of my research, as since discussion can be used to engage students, through the use of captivating ideas and questions, it is obvious why a teacher would want to encourage it.

Whilst reading in preparation for my research, I also looked at the issue of engagement and enjoyment. Richard VanDeWenghe (2009) describes engagement as involving “some type of energy” (p.6), and goes on to say that ‘engagement is often intimately connected with happiness’ (p.7). He suggests that a more familiar term for this kind of engagement is ‘flow’, and argues that this ‘flow’ generally brings pleasure. In school, this ‘flow’ should be intellectually or emotionally pleasurable, and the most engaging learning can be achieved if it “involves sufficient challenge at just the right level of skill” (p.8). This issue of enjoyment becomes important when looking at the results of the participation in a wider context, and these ideas may help to explain my findings about students’ enjoyment of discussion.

Throughout my placements, I had heard many anecdotes about the different behaviours exhibited by boys and girls in the classroom environment, especially when it came to discussion. I wanted to find out if changing a seating plan made a difference to participation, as I had heard that students preferred to sit with other students of the same gender, and would participate best in this way. It was with this in mind that I began to read about participation in the classroom, to try and ascertain whether what I saw in my lessons fitted typical descriptions elsewhere. A suggestion has been made that the classroom climate is a “chilly one for women” (Hall & Sandler, 1982: 3). The research about this states that “women’s educational experiences may differ considerably from those of men, even when they attend the same institutions, share the same classrooms, and work with the same ... advisors” (Hall & Sandler, 1982: 4). Among other things, this ‘chilly climate’ for women can “discourage classroom participation [and] undermine confidence” (p. 5). Furthermore, “women may begin to believe and act as though ... their participation in class is not expected, ... their

contributions are not important [and] their capacity for full intellectual development ... is limited” (p.5). Having said this, however “a number of observational studies have uncovered *limited* evidence that male[s] and female[s] ... act differently in ... classrooms” (Fassinger, 1995: 83, my emphasis), although research in colleges has shown that there is “a clear trend: males participate in classes more than females” (p. 84). Further research, which, it should be noted, was undertaken in a higher education college, has suggested reasons for this trend. One is female students’ “fear of being rebuked and criticized by their professor and/or peers” (Salter & Persaud, 2003: 836). Another is a competitive atmosphere in the class, or the attitude of the teacher. Further reasons are also given, for example non-participation as a fault of class peers, “either because other students [are] unmotivated and wouldn’t participate, or did not prepare for a class and couldn’t” (pp.837-838). There is evidently much debate about the behaviour of both genders in a classroom environment, and it seems that there is research to support several points of view. Interestingly, although there has been a fair amount of research within the field of participation, learning and gender differences in the classroom, very little has been done within RE, so it seemed a fitting topic for study.

It is worth noting briefly that my research took place during a series of lessons in which we were looking at the topic of death. This can be a difficult subject for anyone to talk about, due to its emotional or taboo nature, let alone the fact that in a class of thirty one, it is highly likely that at least of the students will have had personal, potentially recent, experience of it. This has more than one possible effect. On the one hand, in lessons, a “vital requirement is engaging the students at a personal level so that they see the ... issue, its relevance and that they care about it” (The Historical Association, n.d.: 20). If this is not done, then “the way in which teachers handle emotive ... issues can have a negative impact on students so they feel alienated and disconnected” (p.5). On the other hand, if the issues are made too personal, then students may be reluctant to talk about them, from “a wish to avoid causing offence or insensitivity” (p. 5). This suggests that the subject matter under discussion is certainly something to take into account when analysing my findings about participation, as it may well have had an effect on some of the students.

It is also worth taking into account, albeit extremely briefly, the psychology of the type of students involved and gender development in general, as this may help in the analysis of my findings. It should be remembered that a lesson in a classroom is part of a much wider picture - that of a year group or even a school. With this in mind, we see that each lesson takes place in a social environment, where students exist with their peers within social relationships. It has been noted that

“one of the developmental tasks for children is to achieve and maintain positive relationships with peers, ... [and] in these relationships they seek shared understanding, acceptance, relaxation and pleasure, but also self-enhancement and dominance” (Salmivalli et al., cited in Slee & Rigby, 1998: 60). This point may be relevant when it comes to examining participation through discussion, as this type of activity could be used to achieve many of the ends suggested above, and may have been used in any of these ways by any of the students.

As far as male and female friendships are concerned, “entry into secondary school, partly because it is so stressful for everyone, tends to sharpen children’s responses to feelings of uncertainty and difference: (Waddell, 2005: 32). In terms of making friends, previous research has found that “the friendship groups of girls differ in size from boys’ groups, the latter being usually larger”, and that there is also “more agreement about ... which girls belong to which group or pair than there [is] about the boys’ groups” (Salmivalli et al., cited in Slee & Rigby, 1998: 64). In terms of actual gender development, and the differences between boys and girls of this age, there is an “ongoing general disparity, ... between the boys’ and girls’ exam achievements” (Waddell, 2005: 36), and it has been suggested that “females seem to have a relationally oriented self-concept and males have an individuated self-concept. Females seem to define themselves in terms of their social relationships, whereas males seem to define themselves in terms of their individual achievement; and this difference may become particularly strong during adolescence as individual identity becomes an important psychological issue: (Golombok & Fivush, 1994: 187-188). Related to this, research has also shown that “girls prefer dyadic interaction which offers opportunity for emotional intimacy”, and that ‘girls disclose themselves more than boys do” (Salmivalli, cited in Slee & Rigby, 1998: 65). As my study is based on observing gender behaviour, some background knowledge about the way in which different genders behave in general will clearly be useful, and at this point it is particularly interesting to note that “although there is widespread belief that males are superior in mathematical abilities and females are superior in verbal abilities, in fact the research has shown very small differences in these areas ... [and] are so small as to be virtually nonexistent for all practical purposes” (Golombok & Fivush, 1994: 177).

This review of the literature has suggested that “discussion enables students to be critical in their selection of key points, to recapitulate the experience and rehearse it so as to implant it in short-term memory, and to formulate a new schema which will enable [retention of] knowledge and information in the long term”. Discussion teaches students “how to listen to what others are saying,

to analyse their arguments, and compare them with their own experiences. ... It enables students to assess the importance of what they have experienced, and gives them an opportunity to integrate new information into their scheme of things” (Van Ments, 1990: 12). If RE is to be taken seriously as a subject that encourages students to develop their thinking skills, and allows students to move from knowing about something to understanding it, then it clearly must make discussion a feature. Regina Weade and Judith Green (1985) suggested that it is through knowing how and when to respond that students participate in discussion, and it was with these issues in mind that I designed my research.

Methodology

My research took place with informed consent from the students and their parents, and was in line with the current BERA guidelines (British Educational Research Association, 2004). All participants had the right to withdraw from the research, the research risked no detriment to the students, and all participants remain anonymous. My research took place over a series of five lessons, during which I changed the seating plan according to gender each lesson. In the first and last lessons, the students were told to sit where they liked, and for the second, third and fourth lessons I specified where boys and girls should sit, using coloured cards placed on the desks before they came in. Although I chose where boys and girls should sit in relation to each other, I did not create an entire seating plan, meaning that students were free to choose up to a point where and with whom they sat.

I used several different research methods in order to make sure that my research was both valid and trustworthy. I will set out my methods here in order that they may be looked at in connection with my conclusions, so that this study may be judged to be internally valid. The trustworthiness of the data will become clear when looking at my findings, based on my methodology. In order to strengthen the internal validity of my qualitative study, I triangulated my methods in order to guard against significant bias from one particular source by looking at the classroom situation from different perspectives. What follows is a description of my methodology, which was based around my three research questions.

My first question looked at the actual effect of classroom layout on gender participation. I measured this by asking another member of staff, usually my mentor, to sit at the back of the classroom and

note down, on a seating plan which marked the positions of boys and girls, which students participated in the discussion. This was further clarified by different markings depending on whether the student gave a short answer, or whether they gave an extended, more explanatory or analytical answer. The observer also noted whether or not the student was interrupted by a classmate, and if so, by which gender. I chose non-participant observation as opposed to participant observation for this part of my research partly for logistical reasons, as it would have been extremely difficult for me to teach and take these kind of notes at the same time, but also because it ran less of a risk of being “subjective, biased, impressionistic, idiosyncratic and lacking in the precise quantifiable measures that are the hallmark of survey research and experimentation” (Cohen, Manion & Morrison, 2007: 313). In short, a non-participant observer, who has no vested interest in the research, and who is not involved in the lesson in any way, allows a greater chance that the research will be valid. In addition to this, the notes that the observer was asked to take were taken using a pre-prepared structure, which meant that although the observer was someone who knew the class, it was less possible for them to overlook any aspects of behaviour, as it was very clear what they were looking out for. In order to provide further detail to this question, and to allow me to analyse the type of participation that occurred during discussions, the non-participant observer also noted down the number of male and female students who put their hands up in response to any question raised during the lesson, as well as whether or not this question was a closed, factual question or an open, analytical or explanatory one, whether or not they actually had the chance to speak.

My second question, which looked at what the perceived effects of the change of classroom seating plan were, in other words, what the students themselves thought were the effects of the seating on their own participation, was measured through questionnaires. One of these was given to the students before I started changing the seating plan, in order to see how the students thought they would participate, and one was handed out at the end of every lesson, in order to get the students to reflect on their actual participation, and why it was they behaved as they did. The questionnaires were all anonymous, but students were asked to specify whether they were a boy or a girl. I chose questionnaires because the specific questions allowed me to find out quickly and exactly what I needed to know, and meant that I had an answer from every class member, thereby giving me a better understanding of the perceptions and attitudes of the entire class. The questionnaire given to each student at the beginning of the case study asked for responses ranging from ‘strongly agree’, through ‘agree’, ‘neither agree nor disagree’, and ‘disagree’, to ‘strongly disagree’, and included

statements such as ‘I like to answer questions in class’, ‘I prefer to sit with people of my own gender’, ‘I feel more confident to speak out in class if I am sitting with people of my own gender’, ‘I enjoy RE lessons’, and ‘I prefer to spend time with people of the same gender outside lessons’. These statements were chosen to give me a general picture of the attitudes of the students in the class, by giving me some background information about how they felt about gender and participation, as well as giving me a specific idea about how they felt they would participate. One of the drawbacks of using a questionnaire such as this, however, is that the students are forced to respond to categories that I have given them, which may mean that I miss something important or interesting in terms of my research. With this in mind, I designed a different questionnaire that I gave each student, again anonymously, at the end of every lesson. It asked them to rate, on a scale of one to five, with five as the most likely, how likely they thought they were to participate in a lesson with a seating arrangement like the one they had just experienced. This questionnaire also asked if this was more or less likely than normal, and asked them to explain why this was the case, which gave me an insight into what had happened in the lesson that was driven by the participants, rather than by me.

My third question looked at whether or not these seating plans had any effect on the students’ enjoyment of the lessons, and I used informal conversation interviews at the end of the study with four students to examine this. I chose two boys and two girls, one of each gender from the lower end of the class ability range, and one of each gender from the higher end, in order to try and get a picture of the class range. I chose to use an informal conversation interview because of personal limitations on my part. As already mentioned, questionnaires have the potential to be very researcher-led, and I was aware that I did not know everything about the subject of my research. I was keen to allow the students a platform to tell me anything I had not already asked about, and to expand on questions they had already been asked. Although I asked guided the interview, I avoided leading the conversation too strongly, preferring to listen to what the students discussed among themselves, so that I did not miss any illuminating ideas. During the course of the interview, I asked the students to discuss the four seating arrangements with reference to whether they were likely to participate in the class, and why. I also asked them about whether or not they had enjoyed each arrangement, and why, and to finish off, asked whether enjoyment of a lesson meant that they were more likely to take part. I took notes throughout the interview, which provided me with detailed insight into a cross-section of the class.

The three methods of research used here - non-participant observations, questionnaires and informal interviews allowed me to break my research into three distinct parts, in order to give me small pictures that will build up to show the findings of my case study. This triangulation method - which guards against significant bias from one particular method, as it attempts to confirm findings through multiple perspectives (Evans, 2009: 120) - helped to strengthen the internal validity of my study.

Naturally, I encountered some limitations in the course of my research. To begin with, my mentor, who was usually the one taking notes about participation while I was teaching, had to be quicker at some points than at others, depending on the pace of each part of the lesson. In addition, due to other events that form part of the normal responsibilities of a head of department, for two of my research lessons, other staff members offered to take notes. Although the format and instructions given to all observers were the same, there may have been discrepancies in the note-taking about participation. Further to this, there may have been an issue as far as either my behaviour or the behaviour of the students was concerned, as we were all aware that we were part of a piece of research. This may have changed my teaching style or behaviour somewhat, which could be a problem in applying the research in the future, but shouldn't have affected the validity of the research, as any possible change in behaviour as a result of being observed would have been consistent throughout the process. However, as far as the behaviour of the students goes, this may have made a difference to the way in which they behaved, which could have changed in response to being the subject of research, but may have become less pronounced as they got used to the idea. This links to a further potential problem, which was to do with the fact that my teaching style was forced to change in order to be able to observe and record the results of participation. In a normal lesson, I use a 'hands down' approach to discussion, usually choosing one student and then asking them to choose someone else in the class to continue the discussion. During my research, however, I was obliged to ask students to put their hands up when I started a discussion, in order to gauge the number of students who wanted to participate at a particular point. A further problem came to my attention half way through the case study, as the school operated a 'no hands up day', meaning that the students came to their RE lesson with a particular mindset because of what they had been asked to do by their other teachers throughout the rest of the day, and were then asked to change it for my lesson.

Something else that should be taken into account when looking at the findings of the research is the way the lessons are timetabled. As the class have two lessons per fortnight, they are not always at the same time of day, which could quite easily have an effect on the mood of the class, and therefore on their participation. This kind of limitation has an effect on the external validity of the research, as it is difficult to specify the degree to which the research allows ‘generalis[ation] beyond the subjects under investigation to a wide population’ (Nunan, cited in Evans, 2009: 118). I encountered further limitations of this kind while conducting this research, which should be taken into account. To begin with, there were significant difficulties in some of the lessons when the Muslim girls were told that they would not be sitting together. They were particularly concerned that they would be sitting next to boys. In a similar vein, the boy in the class with behavioural and emotional difficulties was also not entirely happy that he would be sitting next to a girl. Although in both cases these problems only presented themselves in the first couple of minutes of the lesson, and all students concerned agreed that the seating arrangement would not present them with any real difficulties, this is something that is particular to this class, and would have an impact if the findings were to be generalised.

Findings and Analysis

This section will present the findings of my case study based on the three questions outlined in my introduction, and the methods explained in my methodology. It will state the factual findings of the research, and will attempt to analyse what these findings show about gender participation and lesson enjoyment of this class while studying this topic. When looking at these graphs (figures 1, 2 and 3), it is important to bear in mind that there are three more girls than boys in the class, which may account for some of the discrepancies between the genders, although it is impossible to tell at which points this may be the case.

The first question looked at the actual participation of the class, by gender, throughout the lesson, and was measured by how often students of each gender spoke. The findings are further classified into categories depending on the type of the answer, that is, whether students were being asked to recall information, or whether they were being asked to explain or analyse.

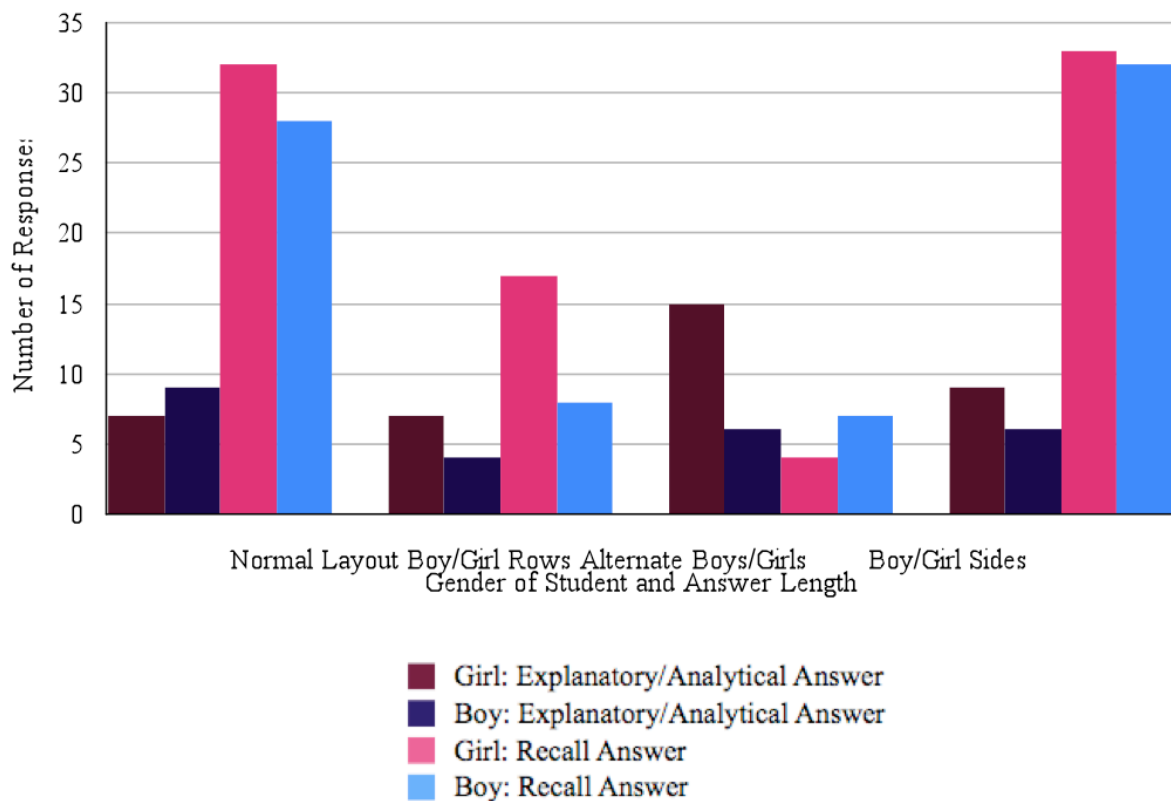


Figure 1. Actual Student Participation

The graph in figure 1 shows that there is only a small difference throughout the study between the participation of boys and girls. We can see that when it comes to answering recall questions, in both a normal layout, where boys and girls tend to sit with classmates of the same sex, and in a seating plan that put boys on one side of the room and girls on the other, there were high levels of participation. In contrast, in the other two seating plans, where students sat either in rows according to gender, or in a seating plan of alternate boys and girls, the participation in response to questions asking for recall of information dropped significantly. There does not, however, seem to be a big difference between the behaviour of boys and girls - rather both genders were less willing to participate in certain arrangements. This supports the anecdotal evidence that both boys and girls will participate better if they are sitting with people of their own gender, although only up to a point, as the lack of participation in the alternate rows of boys and girls does not seem to fit the pattern. The results from the other three set ups seems to suggest that both boys and girls are less inclined to participate in discussion based on recall in a lesson if they are not sitting with people of the same gender, perhaps, as some of my reading suggested, due to a lack of confidence. The

potential anomaly of the alternate rows seating plan could be explained by the fact that the students had less background knowledge about the content of this particular lesson.

If we look at what the graph shows about participation when it came to more developed, analytical thinking, we see a different picture. The fact that there are fewer analytical answers does not concern us - this simply means that there were fewer of this type of question throughout the lesson - understandable as this type of question is posed in order to invite thought rather than knowledge, which inevitably takes more time. Instead, we are looking at the difference in participation between boys and girls when these analytical questions are asked. Again, we see boys and girls answering questions in comparable numbers, which does not seem to support the ideas encountered in my reading about a 'chilly climate' for women, or that women participate less often in class than men. In fact, if anything, when looking at this class, it is the other way around, because there is one instance of significantly more participation from girls than boys - in the lesson with the alternate boy and girl seating arrangement. If anything, this shows that the girls found it less of a problem to be sitting with someone of the opposite gender, at least when it came to answering a 'thinking' rather than a 'knowing' question.

Although these findings are an interesting start, perhaps they can be explained by teacher or student bias. It was, after all, the teacher who chose who would speak first, and the students who chose who would speak after them. It could easily be that I or they influenced the results. With this potential problem in mind, we must look at the following graph (figure 2), which illustrates a desire by the students to participate, and was created from data about how many students put their hands up in response to something, even if they did not actually get a chance to talk.

The graph in figure 2 gives a much clearer picture of what is going on in the classroom, and in fact takes away many of the differences previously encountered between the two genders. Here we see that there is negligible difference between the desired participation of either gender, whether for recall or for analytical questions. The slightly elevated female participation could be explained by the fact that there are more girls in the class, while where there is slightly elevated male participation does not seem to be enough to justify support for the idea that males participate more than females, or that there is a 'chilly climate' for females in this classroom who want to speak out.

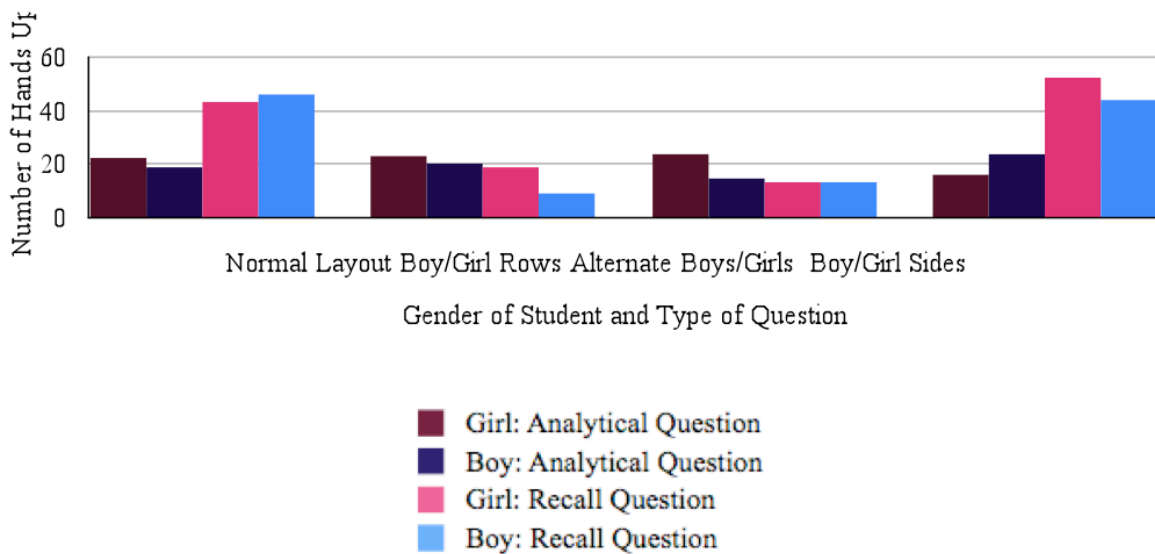


Figure 2. Desire to Participate

Having seen what happened during this series of lessons, we now turn to why this is, and it is here that I will look at the questionnaire given to students before the lesson sequence began, as well as turning to my second research question about perceived participation. Table 1 shows the responses to the statements presented to the students. Again, there is a higher percentage of boys who agree that they are more likely to speak out in class if they are sitting with people of their own gender, unlike girls, of whom the majority have no particular opinion. We see the same trend when we look at out of class preferences - boys, in general, state that they prefer to spend time with people of the same gender outside lessons, unlike the girls. As this questionnaire suggests that boys like to spend time with people of their own gender and are more confident if they do so, this could suggest why it is that there is slightly less male participation when the boys in the class are not allowed to sit with other boys, and it also provides an insight into the fact that this is not the same for the girls. It also provides some support for the anecdotal evidence that inspired my study - it seems to be true that boys at least perform best when sitting with other students of the same gender. Table 1, which shows responses to the statements, when taken with the graph (figure 3) below, tells us about the perceived effect of the changing seating plan on the students.

Statement	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
I like to answer questions in class	1	0	3	4	8	11	2	2	0	0
I prefer to sit with people of my own gender	5	3	4	1	5	10	0	3	0	0
I feel more confident to speak out in class if I am sitting with people of my own gender	4	0	4	1	5	12	1	3	0	1
I prefer to spend time with people of the same gender outside lessons	7	0	5	4	2	9	0	3	0	1
I enjoy RE lessons	1	5	2	7	5	6	3	3	3	1

Table 1. How Students View Themselves

The graph in figure 3 shows the responses to the questionnaire each student was asked to complete at the end of each lesson, about how likely they felt they had been to participate in a set up like the one they had just experienced, in relation to a normal set up where they can sit where they like. It shows that no boy or girl in the class thinks that they are more likely to participate in an alternate boy girl set up - rather the majority said that they were less likely to participate. On the other hand a large proportion of both the boys and the girls said that they were more likely to participate in an arrangement in which boys and girls sat on different sides of the classroom. If we compare these perceptions to the actual data, we can see that they are fairly accurate, especially in terms of participation in the recall questions. Very few of either gender said that they would be more likely to participate in the alternate row layout, which also supports the data gathered about what actually happened.

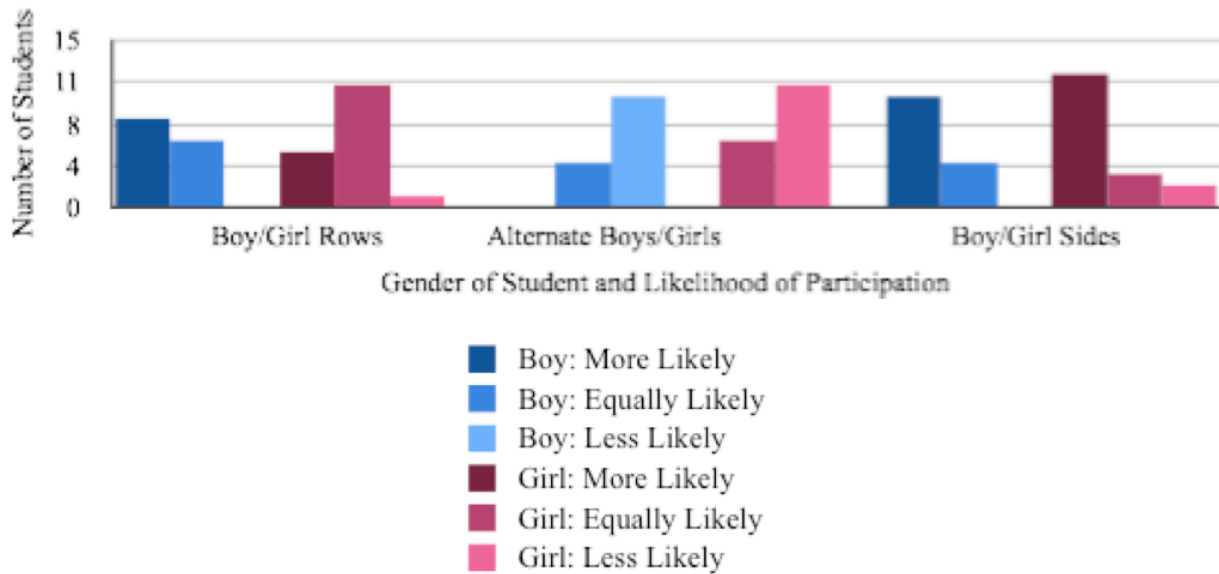


Figure 3. Perceived Student Participation

These two questions have provided an insight into what happens, both on a practical level, and within the students themselves. I will now give a few reasons that may help explain why this is the case. To begin with, what I found out through this brief series of lessons does not seem to support some of the research already done about participation. There are two possible reasons for this: the first being that this research has most often been done in ‘male’ subjects, such as science, computing or maths, rather than ‘female’ subjects, which tend to involve more discussion, and which could include RE. The second reason could be because, as already mentioned, the research usually took place in a higher education environment. It is important to remember that students in year 8 are still children, about to hit puberty, and the gender development that will have taken place by the time they leave school will only just be beginning.

In order to understand this behaviour better, I looked at some of the reasons the students gave on their questionnaires. Without doubt, the word that came up the most often was ‘confidence’. Students participated when they felt confident, and did not participate when they did not feel confident. This seems, perhaps, like common sense, so we must look further to understand why students feel more confident in certain classrooms layouts, and less confident in others. The data I collected has shown that it is not just a matter of sitting with classmates of the same gender - if this was the case then girls sitting with boys on either side of them would be less likely to contribute, and there would also have been more participation in the lesson where students sat in boy girl rows,

as they were surrounded by people of the same gender. The discussion I listened to in my informal interviews gave me a clue as to why this was so. The male students, who reiterated that they were more likely to participate if they felt confident, said that they felt most confident with their friends. The female students said the same thing. The difference becomes clear if we look back at the table of the male and female responses to the initial questionnaire: boys in this class preferred to spend time outside the classroom with other boys. The girls in this class were far less concerned about the gender of their friends. This means that in any seating plan, the girls would have been at an advantage, because they were less likely to feel like they were sitting in an unfriendly atmosphere, even if they were not sitting next to other girls. This links into the research that suggests that girls are more likely to have defined friendship pairs or groups, as a girl may only have to sit next to or near one good friend to feel confident. This potentially also explains the anomaly of the alternate rows for boys and girls, where I would have expected more participation because students were sat with others of their gender. It could have been, in fact, that because of the first-come, first-seated nature of the lessons, many of the students did not end up sitting with friends. The reason that this pattern is likely to be interpreted as a gender issue rather than a simple friendship issue is because, at this age, children of both genders are more likely to have formed friendships with others of the same gender.

There is one final interesting point to note from this research. One of the statements in the original questionnaire was 'I am a confident person'. The boys were more likely to describe themselves as confident, and the girls less so. I addressed this question in the informal interview, and asked the four students to rate their confidence on a scale of one to five. I then asked them to rate how likely they were to participate firstly in a lesson in which they were sitting with friends, and secondly in a lesson in which they were not on a scale of one to five. Although this is a very small sample, and no conclusions can be drawn from it, it is worth pointing out that the more confident a student said they were, the less likely it was that the likelihood of participation changed from one lesson to the next. This would suggest that sitting with friends has more potential for a negative on less confident students.

Finally we come to my last research question - that of enjoyment, and the effect of a classroom seating plan on it. This is important, as enjoyment of a lesson is conducive to better learning, so I was interested to see if there was a correlation between enjoyment and layout, and also enjoyment and participation. The results in table 2 below come from the questionnaires filled in by every student at the end of each lesson.

Classroom Layout	Number of boys who enjoyed the seating arrangement	Number of girls who enjoyed the seating arrangement
Boy/Girl Rows	9	9
Alternate Boys/Girls	3	5
Boy/Girl Sides	14	13

Table 2. Enjoyment

If we compare table 2 with the graphs of participation (figures 1, 2 and 3) it is clear to see that the enjoyment of a lesson clearly affects contributions in it. The assumption here, due to the way the question is asked, that the enjoyment is based on the seating arrangement, however in future planning this is clearly not the only thing that must be taken into account when devising a lesson that the students will enjoy. Based on the findings from the previous research questions and the informal interview with four of the students, it is probably safe to assume that the reason for the enjoyment (or lack of) of each arrangement has to do with whether or not students were able to sit with their friends. This is something that can be taken into account department-wide, especially in the context of the worry about falling numbers for RE at GCSE.

Conclusions

This research, despite its limitations, has been extremely valuable as a tool for improving my practice, and will be hugely useful in lesson planning in the future. Something I was not expecting, however, was how useful it will also be in terms of behaviour management, as my observations while teaching have demonstrated clear ways of encouraging talking in the classroom; and curbing it. Despite the fact that this research took place over a limited period of time, which a particular class with its own particular character, there are no doubt inferences that I have been able to make, and trends that have begun to appear, which could be refined and examined further through future research.

As a way to improve this research, it would have been interesting to study each pupil in the class in more detail, in order to get a clearer picture about participation, not only based on gender, but also on character and background. Throughout my research, all students were anonymous, but it seems that my findings may have been more telling had I had a more detailed picture about who was participating, rather than simply the gender of the participant. This would have been particularly interesting in the case of the boy with behavioural and emotional difficulties, and the Muslim girls, as through anecdotal evidence, that is, some of their comments at the beginning of lessons, the classroom layout seemed to have the greatest effect on them. With more specific information, this research could start to suggest the effect of a seating plan on particular types of people, albeit still in very general terms, and so could help inform planning and practice.

As this research has begun to look at participation according to gender, and lesson enjoyment according to all students, it would be interesting and useful to take one further step, and consider what effect these findings have on achievement. Although I have not had the chance to do this during this particular study, as it stands I have spent several lessons looking closely at a particular group of students, in order that I might reflect on what was going on in my classroom to a deeper degree, and to inform my practice so that all students in my lessons will feel comfortable to speak out, and will therefore be free to learn, and to move from 'knowing' to 'thinking'. Comfortingly, as I prefer not to create rigid seating plans for my classes, my study suggests that I may continue to allow students to sit where they like, as long as they do not distract others, as it seems that there is a great deal to be said for the support of friends in lessons.

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