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**The use of signing with hearing children as a means to communicate and manage behaviour: A study into the perspectives of children in a Year 2 classroom**

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**Abstract**

*This paper reports the findings of a small-scale research study into the use of signing with hearing children as a means to communicate and manage behaviour. It draws upon both my observations and the perspectives of thirty Year 2 pupils from a Hertfordshire infants' school. Classroom research involved observations of the entire class (use of timings and tallying) and interviews involving a focus group chosen at random. It explores whether the use of signing with hearing children constitutes a welcome and enhanced means of communication. It investigates whether children respond better to vocal or signed instruction. It also considers whether signing does in fact aid the management of behaviour by actually reducing disruption. The findings provide evidence that signing has a significant and positive impact on communication and behaviour management, acting as a powerful tool in aiding teaching and learning. Furthermore, the results highlight the importance of listening to children's voices. This study attempts to encourage others by emphasising the many reasons why signing should be adopted as an alternative communication strategy within education and as an essential skill in all aspects of learning and life.*

## **The use of signing with hearing children as a means to communicate and manage behaviour: A study into the perspectives of children in a Year 2 classroom**

### **Introduction**

‘The child has  
a hundred languages  
a hundred hands  
a hundred thoughts  
a hundred ways of thinking  
of playing, of speaking...  
The child has a hundred languages  
(and a hundred, hundred, hundred, more)’  
(Malaguzzi, 1993, p.3)

Communication underpins learning, literacy, emotional and behavioural development. Every element of the National Curriculum involves communication and interaction with each other and the environment. Both the National Primary Strategy and the Early Years Foundation Stage have put increased focus on communication as the core skill for learning (DfES, 2010). Since the 1960s, a growing body of researchers has shown an interest in the use of signing with hearing children as a tool to communicate and manage behaviour. Recent research indicates that hearing children can indeed benefit from using signing in a number of ways (Holzrichter & Meier, 2000; Daniels, 2001; Brereton, 2008).

Signing forms part of my teaching. During previous school experiences, I have witnessed its positive effects on children and have acknowledged children’s responses as they happily embraced signing into their own daily routine. I was, therefore, keen to introduce signing during my recent seven week school placement with a Year 2 class. Drawing upon both my observations and the opinions of Year 2 pupils, my small-scale study seeks to investigate whether the use of signing with

hearing children is a welcomed and enhanced means of communication and behaviour management. The following questions will therefore be explored in this research paper:

1. Do children respond better to vocal or signed instruction?
2. Does the use of signing aid in the management of behaviour and actually reduce disruption?

## **Literature Review**

Signing was developed for use with deaf people all over the world. It encompasses many different forms, such as British Sign Language and American Sign Language, both of which are officially recognised languages (BDA, 2011 and NAD, 2011). Another popular form of signing is Makaton, a unique language programme originally devised in 1973, which uses symbols, signs and speech to enable children and adults with a variety of communication and learning difficulties to interact effectively (The Makaton Charity, 2010).

Statistics show that approximately ninety-nine people speak language for every one person who signs (BDA, 2011). It is, therefore, assumed that language and speech are inseparable. However, largely due to Stokoe's (1996) work, it has become more widely accepted in recent decades that language is not firmly tied to speech but that signing is, in fact, a legitimate natural language (Emmorey, 2002; Kendon, 2004). Signing can, therefore, for some, be a more appropriate form of communication.

The 1960s and 70s saw a departure from a focus on the use of signing with the deaf, leading to more investigations into its use with hearing children, who might also benefit from this form of communication. Firstly, successful research was conducted, addressing three groups: children identified as having special educational needs (SEN), children learning English as a second language (EAL) and children believed to be experiencing emotional and behavioural difficulties. Researchers recognised signing as a bridge to speech for children who could hear but for a variety of reasons did not speak or spoke very little (Schaeffer et al., 1977). This notion was later developed by Marilyn Daniels (2001), one of the leading researchers in this field, who began exploring the impact and benefits of signing upon hearing children and their subsequent educational development.

Researchers believe that if signing has been successful in the past with certain groups of children, then it is reasonable to assume that signed instruction could benefit all children in a primary classroom and consequently the entire learning community (Brereton, 2008). Despite a limitation of current research, we are today beginning to see an emergence, albeit gradual, in the use of signing as an educational tool for a variety of student groups, leading to improved communication and literacy skills (gains in receptive vocabulary, reading and phonetic awareness) together with a decrease in behaviour problems.

According to Pettito and Holowka (2002), infants' hands are ready to construct words using signing before their mouths are ready to speak. Hearing children who sign benefit not only from learning a second language, but also from developing a bimodal ability (manual-visual as well as vocal-aural). The use of signing alongside spoken language engages more senses in the learning process, providing a greater opportunity for children to make sense of information (Edwards et al., 1998). Signs function as built-in pictures of words, serving as clear visuals for spoken and printed words. Daniels (2001) explains that children who are visual learners need visual cues like this in order to understand better.

Brereton's study (2006) found that using signing with hearing children also supported inclusion. The research showed that children excluded socially often used signing with their peers. Shy children seemed to be more comfortable signing than speaking. Brereton's study (2009) based on Alana, a child with emotional difficulties, showed how signing could be used to communicate when the child is upset. This manual form of communication seemed to reduce her anxiety, allowing her to interact and participate more effectively and appropriately with her peers. Instead of pushing another child, for instance, she would sign 'stop'. Realising the effectiveness of this method encouraged the use of more signs in place of physical aggression. Alana needed a non-verbal way to communicate when she became too emotional to communicate verbally. Signing afforded her acceptable means to participate positively in the classroom, resulting in fewer instances of physical aggression. This study reveals the need of some children to communicate non-verbally. Verbal communication may be difficult and even impossible for children during moments of intense emotion. Signing enables children to communicate when speech proves too difficult.

Brereton (2008) also discovered that children used signing to clarify spoken communication with their peers if, for example, they did not remember the spoken word or found the word difficult to say. A year-long study into the experiences of a primary school teaching team, learning to use signing in the classroom, showed that children made use of it when speaking was discouraged, for example, when walking silently through corridors, in the library or during school assemblies. These findings demonstrated how much children appreciated having the power to communicate even when the choice to speak was removed.

The teachers in this study strongly expressed their views as to how valuable signing was for guiding children's behaviour. Working with one child, the teacher could address the behaviour of others without raising her voice; reminders to individuals could likewise be signed ("Please wait", "Sit down") without interrupting circle time and positive behaviour. Children also used signing to communicate their needs to use the toilet, have a drink or to sit with a teacher. Signing in place of voices enabled both teachers and pupils to communicate with minimal disruption. In addition, Daniels (2001) explains how teachers using signing achieved an increase in their pupils' focus and motivation. With the hands engaged, the children seemed calmer and more attentive because they had to look to the teacher for information. The children's response to signing was positive, because they were happy moving and being active.

There are currently a variety of programmes regarding signing in education. Broader, non-specific programmes include concurrent speaking and signing by a teacher: for example the use of signs to give class directions and for expressing words for objects/groups in the classroom. More specific programmes include finger-spelling as a connection to phonemic awareness of letter recognition and memory (Daniels, 2001, 2003; Cooper, 2002). These programmes, alongside other basic research (Ellison, 1982; DeViveiros & McLaughlin, 1982; Heller et al., 1998) all found that signing is positively associated with language and communication development in young children.

Overall, recent research supports the idea that the use of signing in a hearing classroom improves communication and the management of behaviour. However, research on the subject remains limited. Critics, such as Smith and Ryndak (1996) argue that learning, teaching and signing is obviously not feasible for teachers who at best have a very limited knowledge of signing. As with all languages, signing needs to be learned and practised, with attention paid to grammar. Some

signs are tricky to form and using hands to communicate fluently, after always having previously used voice, is a very challenging adjustment to make.

Westwood (2005) notes that adapting new practices can be daunting for teachers who are concerned about time, cost and preparation. Sufficient basic knowledge may not be available to equip teachers, children or the learning environment. However, discussions with the teachers in Brereton's (2006) study prove that learning, teaching and using signing is indeed feasible. They did not find integrating signs into the curriculum to be overly time consuming or problematic. Rather, they accomplished this with great ease, believing, as with any language, it would get easier the more they practised and expanded their vocabularies. They regarded signing as a great tool in supporting children's learning and saw the effects signing had on converting an alienated and aggressive pupil to a 'classroom expert whose contributions were valuable to the learning community' (Brereton, 2009, p.464). Furthermore, this report also highlights the importance of movement for learners. Hannaford (1995) supports this view, commenting on the important link between movement, thought processing and learning. Signing provided an acceptable form of movement during lessons, thereby reducing disruption, for example at circle time (Brereton, 2006).

Although many educators and educational professionals advocate the use of signing in the classroom, this field should be explored in further detail. More needs to be found out about the positive effects signing has in a hearing classroom, to perhaps bring signing to the forefront of education as an imperative tool in teaching and learning. Without suggesting that signing is the only visual-physical communication tool available to teachers and pupils that improves communication and the management of behaviour in classrooms, it is clearly a powerful alternative.

## **Methodology**

My research is concerned primarily with pupils' perspectives on the use of signing as a means to communicate and manage behaviour. Recent years have seen a growing move to consider the views and 'voices' of learners on various aspects of school-related issues. Pupils are being consulted and encouraged to voice opinions about things that matter to them and that affect their learning, in some cases having the potential to influence teachers' pedagogies and practices (Pollard, 2006; Robinson, 2010). The Cambridge Primary Review (Alexander, 2010) recognises the importance of listening to

children's voices, believing the benefits of doing so are many, that 'voice and dialogue support both learning and metacognition, enabling children to become independent and reflective learners' (Alexander, 2010, p.155). All of my research was carried out during a teaching placement on a Year 2 class of thirty pupils, all aged six or seven. Makaton was the signing programme chosen in order to fit in with school policy as nursery and reception staff were already using this with several pupils suffering slight hearing impairments.

Referring to research methodology texts and considering the methods used by Brereton (2006), I decided to adopt a mixed-method approach for my investigation. This mixed design used different data collection techniques, namely observations (use of timings and tallying-quantitative data) involving the whole class and interviews (qualitative data) involving eight children chosen at random by my mentor to include a spread of academic abilities, ensuring a wide range of opinions and views. Both techniques were used to collect data before and after the Makaton signs were introduced. This triangulation of data collection afforded me more than just the one perspective, providing me with convergence between my sources of data and thus a much deeper understanding of my study. It allowed me to explore the children's perspectives on the use of signing in a multi-dimensional way.

Denscombe (2007) highlights that whether the aim is to get a fuller picture or improved accuracy, triangulation can increase a researcher's confidence in the research results, providing 'an opportunity to corroborate findings' (p.138), gain a different perspective which can ultimately 'enhance the *validity* of the data' (p.138). However, he also urges caution, reminding us that triangulation cannot provide the absolute proof required to deem the study entirely correct. Similarly, Greene et al. (2005) and Bogdan and Biklen (2003) stress how both qualitative and quantitative methods can be used in combination to supplement and validate the data.

I chose five signs appropriate to the classroom environment, which would suit my area of study; therefore, *toilet*, *quieten down*, *line up*, *sit down* and *wash your hands*. I spent the first week of our placement, prior to the introduction of the signs, observing the teacher's already established rules and methods regarding these instructions/requests. I tallied the frequency of interruptions caused by the need for the toilet or the requests for quiet and timed how long it took the children to line up, sit down and wash their hands at certain points in the school day. In that same week I conducted eight

individual interviews, following a set of three very straightforward questions (see Appendix A) which I administered face-to-face. The aim was to find out what children normally do when they need the toilet and how the teacher usually asks for quiet, children to line up, sit down and wash hands.

I introduced the signs the following week, teaching one per day for five days and incorporated them into my every-day teaching for the rest of the placement. My mentor and trainee partner also chose to adopt and recognise the signs to establish consistency. Towards the end of the placement, I spent a week re-timing and re-tallying those same circumstances at the same times of day to see whether the implementation of signing had made an impact on communication and behaviour management in the classroom. The same eight children were re-interviewed. To avoid influencing the children to say what they thought I wished to hear - thereby resulting in an unfair test - my teaching assistant, a neutral participant throughout the study, led the interviews. The questions were the same as before plus two additional questions regarding the children's personal views on the use of signing (see Appendix B). I wanted to find out whether signing had made a difference to class communication and management of behaviour and what the pupils' views were now they had been given a choice between verbal and non-verbal communication. Did they adopt and respond more positively to signing in favour of verbal instruction?

## **Individual Interviews**

I decided to use individual interviews as my qualitative method of data collection to gather the children's perspectives. Interviews yield high quality accurate data (MacBeath et al., 2003; Drever, 2003) as one is able to cover all questions, explain any ambiguities, correct any misunderstandings (Bell, 2005) and 'probe for clarification' (Drever, 2003, p.3). The children usually engage well and, even if usually shy, are given the opportunity to voice their feelings away from the rest of the class (Macbeath et al., 2003). A small number of straightforward questions gave the interview a structure that would serve as a guide but also allowed a considerable degree of latitude within the framework, giving the respondents the freedom to answer in their own words and in their own time (Bell, 2005). Asking the questions, having a discussion and then scribing the answers for the children also suited the needs of their age range (Macbeath et al., 2003). One of the main drawbacks with the



individual interview method is that respondents strive to always please and give the ‘right answer’ (Denscombe, 2007). That is why I used a neutral adult to conduct the second set of interviews in which the questions were no longer just asking about how various aspects happened, but included opinions and reasoning behind the chosen preferences.

## **Observation**

I chose structured observations in the form of event sampling (requiring the use of tally marks) and scheduled observations (timings recorded with a stop-watch) as my quantitative approach as they afforded me the opportunity to gather “‘live’ data from ‘live’ situations” (Cohen et al., 2007, p.396) in a systematic approach that would generate numerical data. This method is good for finding out frequencies of observed situations and behaviours so that comparisons can be made (Cohen et al., 2007). However, this structured approach also has its disadvantages. Bell (2005) criticizes it as being subjective and biased, the researcher having decided on the focus rather than ‘allowing the focus to emerge’ (p.188). Yet both Denscombe (2007) and Bell (2005) advocate the use of structured observations, arguing that the researcher will have obviously indentified the focus of study and that structured observations in the forms of event sampling and scheduled observations provide a consistent framework for a fair test.

Cohen et al. (2007) also underlines the need for additional methods of observation so as to provide the required corroboration and triangulation to ensure that reliable inferences derive from reliable data. I, therefore, made use of two interview sessions (before and after) and two forms of observations (also before and after), to provide the necessary triangulation to ensure my data was as reliable as possible.

## **Ethical Considerations**

‘Social researchers should be ethical. In the collection of their data, in the process of analysing the data and in the dissemination of findings’ (Denscombe, 2007, p.141).

The ethics of the research were considered carefully before commencing. I completed a checklist, which was signed by my personal tutor to ensure that all of the required criteria for an ethical research project were met (see Appendix C). I sought approval for my research topic with the

Headmistress as well as my class mentor, and showed them a copy of the parental consent form that I intended to send home. Cohen et al. (2007) stresses the importance of informed consent, not only from the parents or guardians of young children but also from responsible individuals in the institution who are providing the research environment, facilities and resources. Once confirmed, I asked the parents and guardians of the eight children chosen for the interview to sign the letter of consent if they were happy for their child to participate in my investigation (see Appendix D). The consent letter briefly outlined my research topic, what their child would be involved in and a reassurance that their child and child's responses would remain anonymous.

Denscombe (2007), Cohen et al. (2007) and Taber (2007), all highlight the appropriateness of seeking the permission of the individuals directly involved, irrespective of age. I therefore asked the children before both interview sessions whether they wanted to participate, whether they had any questions and emphasised that they could opt out at any point. Cohen et al. (2007) explains the essence of anonymity 'is that information provided by participants should in no way reveal their identity' (p.64). I therefore informed both parents/guardians and the children that names and individual answers would not be shared with anyone else. Accordingly all names of institutions, staff and children in this assignment have been changed.

Moreover, before embarking, I gave much thought to further ethical problems that could arise. I was primarily aware that I would be alone with each child in the first session of interviews. I therefore chose to conduct the interviews in a corner of the open-plan communal room that was always busy, making sure to inform the teacher when taking the children out. My teaching assistant did the same for the second round of interviews. My second consideration was to make sure the children felt comfortable participating, without feeling as though they were being 'tested'. Therefore, I clearly explained the aims of the interview, highlighting explicitly that I simply wanted to hear their thoughts on the subject and that there were no right or wrong answers.

## **Presentation of Findings**

The data from my mixed method approach was triangulated to reveal different yet converging perspectives, giving me a clear overview and deeper understanding of my study. Both the qualitative and quantitative approaches used supplemented each other suitably in an attempt to

legitimise my results as far as possible. Indeed, the triangulation of my research data and results gave me the opportunity to corroborate my findings.

## **Interview Session 1**

The aim of the first session of interviews was to establish, before I introduced signing, how the children viewed their customary routine, how they usually asked for the toilet and how their teacher organised lining up, washing hands, sitting down and quieten down. I also wanted to hear their views on whether they thought the current methods worked well and why.

The majority of the children, including Alex, Clara, Jasper, Leo and Marco explained that they put their hand up and asked when they needed the toilet. Greta and Nora sometimes asked but interestingly also made use of the ‘T’ sign they had learned in Year 1 with Mrs Lupi. Emma was the only one who just used the ‘T’ sign when needing the toilet, again explaining how she had learned that in Year 1. Marco made reference to the ‘T’ sign that he used to do in Year 1 but was quick to explain that in Year 2 you asked (see Appendix E-L, Qu. 1).

All children said that verbal instructions were given for lining up. Marco also mentioned a ‘lining up song’ and occasional clapping of hands or actions as accompaniment to the direction (see Appendix E-L, Qu. 2[a]). Again the emphasis is on verbal instruction with regards to ‘sitting down’. Alex, Clara and Jasper thought they sat automatically, the teacher only telling them to if they needed reminding (see Appendix E-L, Qu. 2[b]).

The call for quiet also predominantly involved the use of voice (see Appendix E-L, Qu. 2[c]). However, the children made it clear that their teacher also used a variety of techniques to achieve this, whether clapping hands, doing actions, ringing bells, ‘Shhh-ing!’ or as Clara mentioned “just looks at us and waits”. Marco was the only one who did not mention verbal instruction, rather that children should “do it but if we don’t then our teacher does some actions and that makes us.” The request to wash hands and get ready for lunchtime proved also to be oral. Again, sent in groups or teams, all children mentioned that it was ‘said’ and they were ‘told, called and asked’ (see Appendix E-L, Qu. 2[d]).

Upon being asked whether they thought these forms of instructions worked well and if so why, it became apparent that the children felt it all to be too noisy. They all answered that these forms of instructions only sometimes worked. They were very aware of the noise levels and the disruption that was usually caused. Lining up was repeatedly singled out by the majority of interviewees as a problematic and loud procedure; “pushing in line and being noisy” (Alex), “lining up is always noisy, chatty and silly” (Clara), “it’s a bit noisy like when we line up” (Jasper), “children are not listening and are noisy, like when we have to line up” (Leo), “making noise like with lining up” (Marco). All children emphasised their dislike of too much noise, equating it to negative behaviour, some mentioning the inability of others to listen carefully. Noise was claimed to give “me a headache” (Clara), “waste our time and we’ll be late for something” (Emma), “children are not listening” (Greta), “hurts my ears” (Leo) and “it’s loud and then it’s hard to listen and to hear what the teacher is saying” (Nora) (see Appendix E-L, Qu. 3). The customary routine regarding these five requests is therefore revealed as a predominantly verbal and noisy one.

## **Interview Session 2**

The second session of interviews took place at the end of my placement and after the signs had been introduced and employed for a number of weeks. My teaching assistant led this session and noted down the children’s responses. The intention was to discover whether, now that they were given a choice between verbal and non-verbal communication, the children preferred signing to voice, responded better to the teacher’s non-verbal instruction and whether any difference was made to the customary routine of communication and behaviour management within the class.

The interview data shows that all children were aware of the teacher’s non-verbal instructions for line up, sit down, quieten down and wash hands, which had become the norm of communication regarding these directions (see Appendix M-T, Qu.2 [a-d]). All children said they now used the sign for toilet, only Greta, Leo and Nora mentioning that they sometimes also still put their hands up (Greta explicitly mentioning the use of the sign only when Miss Mottley was teaching) (see Appendix M-T, Qu. 1).

Asking the opinions of the children as to whether they thought these forms of instructions worked well and if so why, provided a clear and definite ‘yes’ from all. Reasons for this included,

“everyone has to watch carefully instead” (Alex , Greta and Leo), “people take notice” (Clara), “if your throat is sore you don’t have to speak...listen more carefully now” (Emma), “We can listen better” (Jasper), “it is easier than using your voice all the time” (Marco) and “it shows us what we need to do” (Nora). Furthermore, they all commented positively on the reduction of noise (see Appendix M-T, Qu. 3).

When asked which they considered more effective, signing or voice, all eight interviewees preferred signing; that it was “easier and quieter” (Alex and Greta), “when people use their voice no-one listens properly. It is also less noisy” (Clara), “children listen better” (Emma), “it is always noisy when you use your voice” (Jasper), “it gets people to do things and there is no shouting out” (Leo) and “people watch carefully” (Marco). Nora liked signing but was the only one to comment that you could only use it if you were taught it and knew what the signs meant (see Appendix M-T, Qu. 4).

Accordingly everyone was keen to continue using signing and hoped their teachers would agree because it is “good” (Alex, Emma and Nora), “less noisy” (Clara), “fun and quieter” (Greta and Marco), “everyone listens and watches carefully” (Jasper) and “it is obvious what you want” (Leo). Alex even wanted to “learn some more” (see Appendix M-T, Qu. 5). Overall, considering both interview sessions and the pupils’ resulting perspectives, it would appear that the use of signing did indeed make a positive difference to communication and behaviour management in the class. The children welcomed and adopted signing, preferring it to verbal instructions, responding positively to its use and wanting to continue using it in the future. They were very much aware of the role it played in decreasing noise levels and disruption.

## **Structured Observations**

Figures 1 and 2 (below) summarise the cumulative number of times “toilet” and “quieten down” were communicated at three consistent points during each day over two 5-day periods, one before (Sample 1) and one after (Sample 2) the relevant sign was introduced. The charted analysis shows definite decreases in cumulative number of observations following the introduction of the signs. The cumulative number of interruptions requesting the toilet fell from 25 to 19 and the request for

“quieten down” decreased by c.50%. Both these event samples suggest that signing has a positive impact on classroom communication due to disruption being reduced.

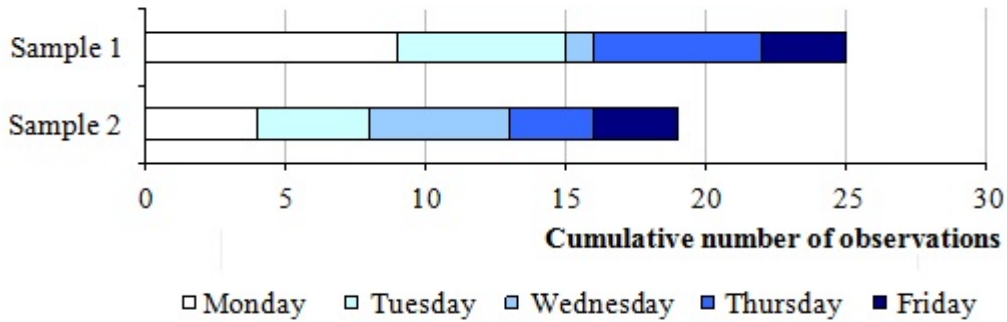


Figure 1: "Toilet" event sampling

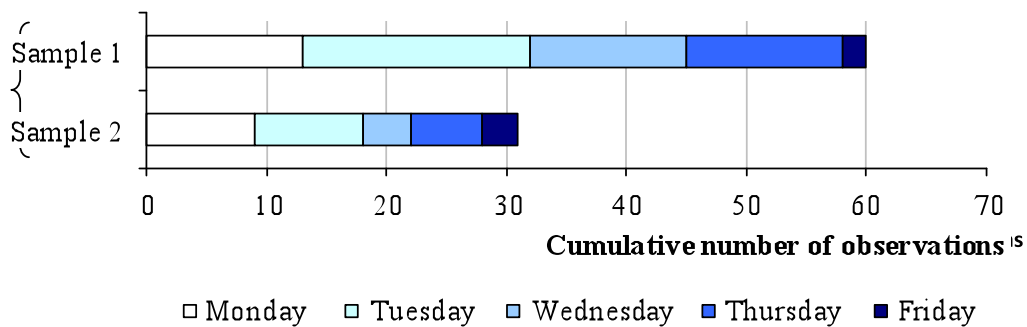


Figure 2: "Quieten down" event sampling

Figures 3 - 5 (overleaf) summarise the results of the timed observations that took place at similar points during the two 5-day sampling periods. Signing was again introduced after Sample 1 and before Sample 2.

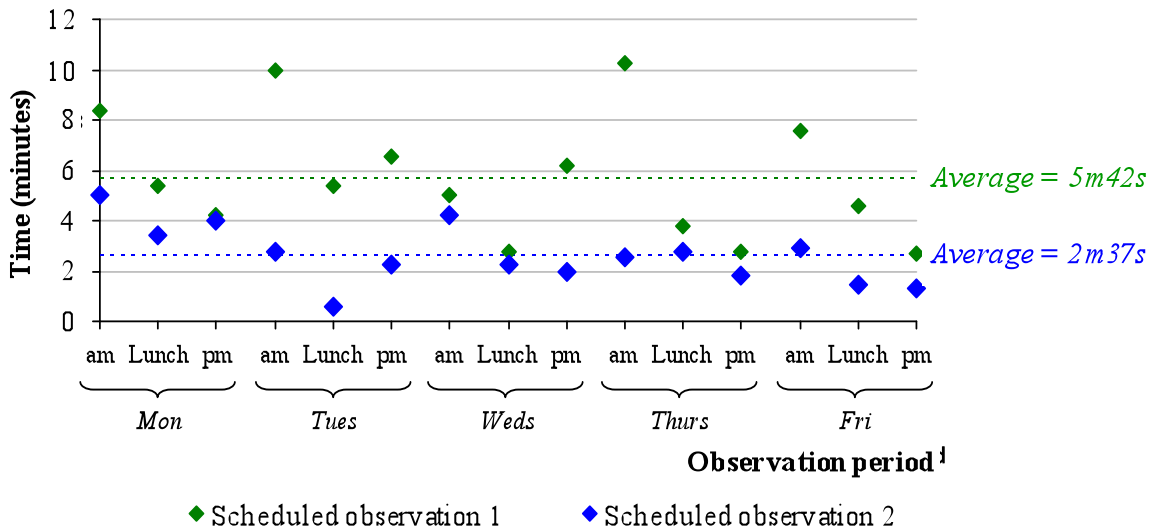
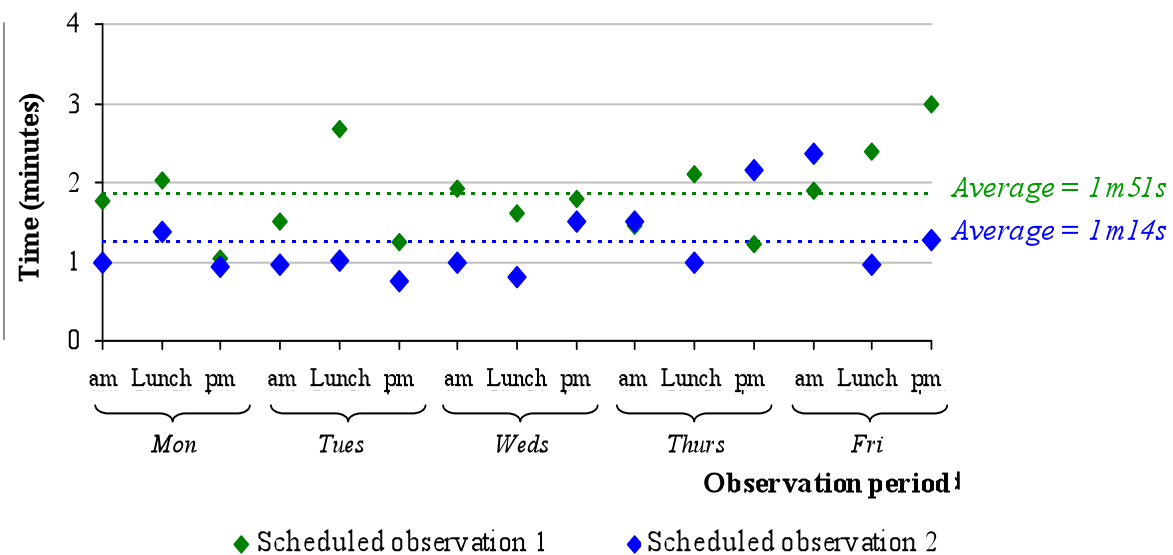


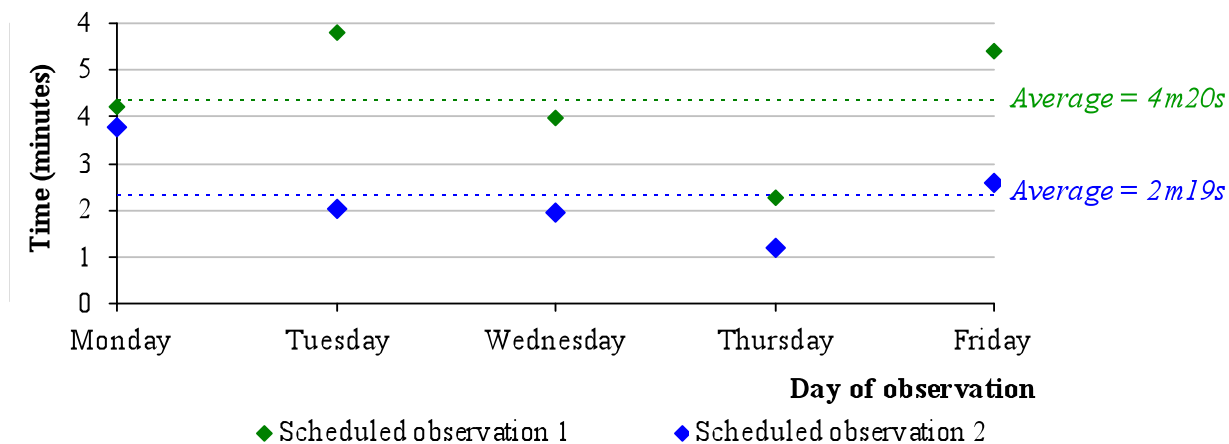
Figure 3: "Sit down" scheduled observations

Figure 3 above summarises the time taken for children to adhere to the instruction to "sit down". Before signing was introduced, the average time for the class to sit down was 5m42s. This more than halved (to an average of 2m37s) following the introduction of signing.



**Figure 4: “Line up” scheduled observations**

Similarly, Figure 4 on the previous page summarises a similar shortening in the time taken for the class to line up when using signing, from an average time of 1m51s down to an average time over the second 5-day period of 1m14s.



**Figure 5: “Wash hands” scheduled observations**

Finally, Figure 5 illustrates the time taken for children to wash their hands. This action, which occurs daily just before the lunch break (hence one data point per day rather than three), took an average of 4m20s to complete when children were instructed to do so verbally. Following the introduction of signing, the average time taken to wash hands fell to an average of 2m19s over the course of the second scheduled observation. In summary, both the event sampling (indicating a reduced frequency of interruption) and the scheduled observations (pointing to greater responsiveness in carrying out instructions) corroborate the findings of the interviews; signing appears to have a significant positive impact on communication and behaviour management.

## Conclusion

From the data collected, it would appear that the use of signing with hearing children is an effective tool in communication and behaviour management. Both the interviews and observations provide strong evidence that the children welcomed and adopted signing, tending to respond better to non-



verbal instruction and viewing it positively as a means to reduce noise and disruption. As a result my data goes some way to suggest that signing does indeed aid communication and the management of behaviour. This finding is in line with Brereton (2006; 2008; 2009) whose studies, regarding inclusion, the appreciation of diversity, opportunities for participation and the reduction of disruption in a hearing classroom, showed positive results with the implementation of signing. She found that signing as a whole-class communication tool was feasible and fostered inclusion in the classroom, acting as a powerful means in breaking down barriers to participation and learning.

Previous research by Daniels (2001; 2003) also suggests the benefits of using signing in a hearing classroom. Her studies have shown the effective impact signing has on children's educational development. Relative to a control group, children exposed to signing after one year gained in receptive vocabulary, increasing academic literacy scores. Daniels (2001; 2003) also highlights the continual and successful use of signing as a tool to communicate for diverse groups of pupils identified as having special educational needs. For example autistic children, children with Down's syndrome, 'non-verbal' children or those exhibiting severe behavioural difficulties, all benefited from the alleviating effect of having one universal language. Frustrations at the inability to communicate decreased, confidence rose, social barriers were removed and when signs were learnt first, verbal language skills were stimulated much faster. Other researchers such as Cooper (2002), Heller et al. (1998), DeViveiros & McLaughlin (1982) and Ellison (1982) found similar gains having integrated signing in a naturalistic way into a hearing classroom curriculum. Positive developments were made with regard to vocabulary and reading skills and there were increasing scores on measures of literacy achievement.

My study contradicts Smith and Ryndak (1996) and Westwood's (2005) views that signing is not feasible for teachers without sufficient knowledge and resources. With only a basic knowledge of American Sign Language and no previous knowledge of Makaton, I managed to introduce a small number of Makaton signs. My results coincide with those of Brereton (2006; 2008; 2009) and Daniels (2003), demonstrating that introducing signing, be it basic (for routine instructions or objects / groups in the classroom) or more fluent (predominant means of communication), is both feasible and effective.

Finally, this research project focused mainly on pupils' perspectives regarding the use of signing as a means to communicate and manage behaviour. The observations made were a means to supplement and corroborate the findings of the interviews in an attempt to legitimise my results. The findings in this study do not reflect previous research on the effects signing can have on educational development, for example literary achievement. Due to time constraints, there was no opportunity to replicate Daniels' (2001) study testing and comparing actual literacy scores after a year-long study. It must be emphasised how limited current research is. My study is an attempt to encourage further investigation into this topic to demonstrate the importance and effects of signing in a hearing classroom. Whether focus is placed on communication, behaviour management, inclusion or special educational needs, more concrete data must be collected to prove signing's status as a powerful tool in children's education.

Furthermore, this study has not only touched upon positive evidence for the use of signing in a hearing classroom, but has also illustrated the importance of allowing children the opportunity to voice their opinions on matters that affect their education. I agree with Brereton (2008) when she writes, "signing was an additional way for them to demonstrate their vast abilities, reminding us adults not to underestimate them or limit their learning to what we think preschool children should be taught" (p.321).

## **Methodology Analysis**

Some strengths of the research methodology used in this study can be observed. The use of triangulation of two different methods of data collection meant that a larger amount of data was collected, providing more insight into the use of signing as a tool to communicate and manage behaviour. It also allowed for the cross-checking of data in different contexts (Bell, 2005). By using a mixed-method approach, I attempted to reduce the disadvantages that independent data collection methods usually produce, such as bias reflected in the type of data collected and the way it is interpreted and, in an interview situation, children giving you answers they think you will want to hear and then demonstrating opposite characteristics during observations.

Greene et al. (2005) highlight another positive element of using both quantitative and qualitative methods of data collection, claiming that quantitative methods seek "realism, objectivity, causal

explanation and universal truth”, whilst qualitative methods support the “interpretive, value-laden, contextual and contingent nature of social knowledge” (p. 274). This is true of my own research, as I could objectively assess both sets of data to provide an overall image in which it is clear that the children’s perspectives regarding the use of signing corroborate the findings from the structured observations, confirming that the children responded better to signed instruction and disruption was reduced.

However, there were some restrictions with this methodological approach. According to Denscombe (2007), the use of multiple data collection strategies “will require sacrifices elsewhere” (p.138) because of the need to multi-task due to constraints on time. I carried out two sets of interviews and two sets of observations but in comparison to previous research, my project spanned a short space of time. I would have liked to have extended this investigation by interviewing more children and observing over a longer period of time. I believe this would have given me a richer and more detailed illustration of the effects of using signing in a hearing classroom. However, to comply with the University’s guidelines, all data was to be collected in the equivalent of three afternoons, which resulted in a strict time frame and also limited the number of children that could be interviewed. Bell (2005) and Cohen et al. (2007) discuss the suitability of sample sizes. Obviously the findings of my sample group of eight children cannot be generalised to represent all the children in the country. In addition, having my interviewees chosen at random by my mentor may also not produce a fair representation of the population.

Considering the time and situational constraints, I believe the research methods I chose have been successful. The mixed-method approach was a good framework in which to investigate my chosen topic. Clearly my results cannot provide the decisive ‘proof’ required to deem this study entirely conclusive and should therefore be interpreted with caution. A great deal of further research needs to be carried out on a much larger scale across the country, involving more schools in a variety of environments and a variety of children to validate the findings of my small-scale project. Only then would researchers be able to draw authoritative conclusions from the results about whether signing really is an effective tool in children’s education.

## **Implications for Professional Development**

This research project has afforded me a great opportunity to collect and analyse data which not only has resulted in convincingly confirming the place signing has in my teaching, but has also illustrated the importance of gaining pupils' perspectives on issues that affect them. Children's opinions matter; they are the expert witnesses on the many topics that educators are concerned with today. I agree with the Cambridge Primary Review (2010) in which Alexander insists that it "would have been indefensible to ignore the voices of those whose lives, education and futures are what primary education is all about" (p.143). I will therefore strive to obtain on a regular basis my pupils' views of learning and be fully aware of their opinions and understanding in order to gain the valuable information needed to ensure my teaching is effective and appropriate to all children.

In terms of my own professional development, I intend to continue using signing as a means to communicate and manage behaviour in my classroom. My research found that it was not particularly difficult, time consuming or a strain on resources for myself and others to implement. I therefore also hope to inspire other teachers to use it as I did whilst on my recent placement. My mentor and other colleagues were extremely keen to continue with the signs I had introduced as well as learn some additional ones. I myself, as a keen linguist, am hoping to attend a British Sign Language course during the summer to develop my basic skills and become more fluent. I view signing as one of our "hundred languages" (Malaguzzi, 1993). To me it is a universal language. Not only does it provide us with an additional skill, but it also helps increase people's appreciation of diversity, removing barriers, alerting us to the value of communicating in different ways, opening a door to explore the richness of diverse cultures. Signing is something in which I am particularly interested and something I would sincerely like to develop further and perhaps specialise in for the future.

There are so many reasons why signing should be fostered not only for deaf people. Researchers, such as Daniels (2001) and Brereton (2006) provide us with examples of the positive effect that signing has on the development of social, emotional and academic behaviour. My research also highlights the difference signs in place of verbal instruction made on the classroom atmosphere and the children's engagement. Communication is an essential component of our lives and fundamental to learning. The Early Years provides a perfect setting for children to start learning and developing

these much needed communication skills. Therefore, as an Early Years teacher, I will endeavour to promote communication, specifically making use of signing in my own teaching to enhance the children's learning as much as possible. By doing so, I hope to give children access to a powerful tool that can be used in all aspects of their learning and future lives.

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## **Appendix A: Interview 1 template**

NAME:

DATE:

### **Questions**

1. How do you usually show the teacher that you need the toilet?
2. How does your teacher usually get you to:
  - a. line-up?
  - b. sit down?
  - c. quieten down?
  - d. wash your hands and get ready for lunchtime?
3. Do you think these forms of instructions work well? If so, why?



## **Appendix B: Interview 2 template**

NAME:

DATE:

### **Questions**

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?
2. How does your teacher usually get you to:
  - a. line-up?
  - b. sit down?
  - c. quieten down?
  - d. wash your hands and get ready for lunchtime?
3. Do you think these forms of instructions work well? If so, why?

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning - which do you think is better? When we use our voices or when we use signing? Why?

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why?

## Appendix C: Ethics Checklist

**University of Cambridge - Faculty of Education  
Early Years and Primary PGCE  
Ethics checklist for research during PGCE placements**

This checklist is intended for use ONLY by Faculty of Education students undertaking initial teacher education ('trainees') for classroom-based research carried during their formal professional placements as temporary members of school staff. The context of this research is that it will be undertaken with pupils in classes for which a qualified teacher has legal responsibility who acts as 'gatekeeper' and where the trainee's intended enquiry has been discussed with and approved by the responsible teacher(s) for the class(es) concerned.

**Trainee name:** Amy Mottley

**School/setting:** [REDACTED]

Questions to be answered by the trainee -please *clearly ring* the appropriate response.

- |  |   |
|--|---|
| 1) Do you understand why educational enquiry must be scrutinized from an ethical standpoint before any research commences?   | <input checked="" type="radio"/> yes/no |
| 2) Have you read and do you understand the current guideline on educational research ethics issued by the <b>British Educational Research Association?</b> ( available at <a href="http://www.bera.ac.uk/files/guidelines/ethica1.pdf">http://www.bera.ac.uk/files/guidelines/ethica1.pdf</a> )  | <input checked="" type="radio"/> yes/no |
| 3) Can you confirm that <i>to the best of your belief</i> the research you plan to carry out will NOT be to the educational detriment to any pupils involved, and that there is no reason to expect it to cause any harm to any participant –including damaging any pupil's confidence, motivation, interest or self belief in school? | <input checked="" type="radio"/> yes/no |
| 4) Can you confirm that you will have sought any necessary permissions - for example to record lessons, or to work with pupils outside of timetabled lessons- in line with the school's policies and procedures? This might include seeking permission from parents, with guidance from school staff.                                  | <input checked="" type="radio"/> yes/no |
| 5) Can you confirm that you have discussed your research plan with your mentor and other staff responsible for any specific class(es), and that they have approved your plan?  | <input checked="" type="radio"/> yes/no |
| 6) Can you confirm that any substantial change to your research design subsequent to completing this form, will be discussed for approval with your mentor (and other school staff if necessary) and shared by email with your partnership tutor?  | <input checked="" type="radio"/> yes/no |

**Trainee signature and date:** Amy Mottley 10/12/10

**Partnership Tutor name:** Helena Staples

- I have checked that the trainee has responded 'yes' to all questions above.  
 I have discussed issues arising from the trainee not responding 'yes' to one or more of the questions above, and am convinced that this project is ethical (as explained in notes overleaf)

**Partnership Tutor signature and date:**  
H Staples 31/3/11

## **Appendix D: Letter of Consent**

*Faculty of Education*



Research for an extended essay to be carried out by a teacher trainee at [REDACTED] School

Dear Parent / Carer,

I am writing to let you know about a small-scale research project that is being carried out in your child's school and in which I hope your child will be involved.

I am Amy Mottley, a trainee teacher currently working at [REDACTED]. I am carrying out a small-scale research project as part of my Post-Graduate Certificate of Education course. The data from this research will be used in writing an examined assignment focusing on children's ideas about factors that have an impact on their learning. The subject that I'm investigating is signing with hearing children as a means to communicate and manage behaviour.

In order for me to collect information about this topic it will be necessary to interview your child. The interview data will only be used for analysis by myself. All references to the school and to the children involved in the research will be anonymised in the essay that I will write using the data.

In order for me to be able to carry out this work I need to ask for your written consent, on the attached form, to the collection of the material outlined above. I would ask you to return the attached form to me, via your child's class teacher, no later than Monday 7<sup>th</sup> February 2011. If you have any queries about the work please do come in and see me in school.

Thank you very much for your help.

Yours sincerely,

## Appendix D: Letter of Consent

*Faculty of Education*



UNIVERSITY OF  
CAMBRIDGE

"The use of signing with hearing children as a means to communicate and manage behaviour. A study into the perspectives of children in a Year 2 classroom".

School: [REDACTED]

Teacher: [REDACTED]

Child: \_\_\_\_\_

I hereby consent to my child being involved in the data collection for this research project, which will involve an interview. I understand the nature and purpose of the research project, as communicated on the information letter that accompanies this form. I understand the purposes for which the data will be used, and that references to children and their school will be anonymised in academic writing resulting from the project.

*(Please tick the box to signify that you have given permission).*

Signed: \_\_\_\_\_

Relationship to child: \_\_\_\_\_

## **Appendix E: RPP Interview 1 with Alex (10 December 2010)**

1. How do you usually show the teacher that you need the toilet?

*I ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher sends us in teams or groups and says it.*

- b. sit down?

*She says a few different things and does different ways, so I'm not really sure. We normally sit down but if not everyone is sitting then she counts and when the time is up, we must be there or she gets cross.*

- c. quieten down?

*Our teacher says it.*

- d. wash your hands and get ready for lunchtime?

*Our teacher tells us to.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, sometimes but some children need to be asked. Those children are sometimes naughty, chatting, pushing on the carpet and in line and are being noisy.*

## Appendix F: RPP Interview 1 with Clara (10 December 2010)

1. How do you usually show the teacher that you need the toilet?

*I ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher tells us to go in teams.*

- b. sit down?

*We just sit but otherwise our teacher says it.*

- c. quieten down?

*Our teacher says it, claps her hands, does actions or just looks at us and waits.*

- d. wash your hands and get ready for lunchtime?

*Our teacher tells us to go in teams.*

3. Do you think these forms of instructions work well? If so, why?

*It works sometimes because our teacher will get cross if we don't. Lining up is always noisy, chatty and silly. I don't like noise because it gives me a headache.*

## **Appendix G: RPP Interview 1 with Emma (10 December 2010)**

1. How do you usually show the teacher that you need the toilet?

*A 'T' sign with fingers. I learnt that in Year 1 with Mrs Lupi. Our teacher now either nods or shakes her head when I ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher says to, usually by groups.*

- b. sit down?

*She tells us to.*

- c. quieten down?

*Our teacher does actions that we must copy or she says it or she claps her hands.*

- d. wash your hands and get ready for lunchtime?

*Our teacher calls groups to go.*

3. Do you think these forms of instructions work well? If so, why?

*It works sometimes but sometimes children can't listen. Other children are busy talking and being noisy. I don't like talking. It wastes our time and we'll be late for something.*

## Appendix H: RPP Interview 1 with Greta (10 December 2010)

1. How do you usually show the teacher that you need the toilet?

*I do the 'T' sign for the toilet, but sometimes I ask. I learnt the 'T' sign in Mrs Lupi's class in Year 1.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher tells us to.*

- b. sit down?

*Our teacher tells us to stop, tidy-up and come and sit on the carpet. Then sometimes our teacher just reminds us.*

- c. quieten down?

*Our teacher tells us or rings her bells.*

- d. wash your hands and get ready for lunchtime?

*It's part of the routine. Our teacher asks us to go in groups.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, but not always because sometimes the children are not listening and are chatting-usually the boys!*



## **Appendix I: RPP Interview 1 with Jasper (10 December 2010)**

1. How do you usually show the teacher that you need the toilet?

*I put my hand up and ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher tells us and where and who you're not to stand next to.*

- b. sit down?

*We usually just do but otherwise our teacher says it.*

- c. quieten down?

*Shhhhh! Or says it.*

- d. wash your hands and get ready for lunchtime?

*Our teacher asks us to go*

3. Do you think these forms of instructions work well? If so, why?

*Not always because sometimes children interrupt and talk and sometimes it's a bit noisy like when we line up. I only like noise when I'm outside.*

## Appendix J: RPP Interview 1 with Leo (10 December 2010)

1. How do you usually show the teacher that you need the toilet?

*During lessons I put my hand up and ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher says it but we must tidy up first.*

- b. sit down?

*She tells different rows to sit down.*

- c. quieten down?

*Our teacher tells us to or shows actions that we must copy or rings her bells.*

- d. wash your hands and get ready for lunchtime?

*Our teacher says "once you've finished your activity, you may wash your hands".*

3. Do you think these forms of instructions work well? If so, why?

*Sort of because sometimes children are not listening and are noisy, like when we have to line up- that hurts my ears.*

## **Appendix K: RPP Interview 1 with Marco (10 December 2010)**

1. How do you usually show the teacher that you need the toilet?

In Year 1 you make a 'T' sign. In Year 2 you put your hand up and ask.

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher sings the "lining up from head to toe" song. Sometimes she does actions that we must copy and sometimes she claps or says it.*

- b. sit down?

*Our teacher says "Are you listening?" and we must say "Yes we are!" and then she tells us to sit down and we do.*

- c. quieten down?

*We should just do it but if we don't then our teacher does some actions and that makes us.*

- d. wash your hands and get ready for lunchtime?

*She tells a table at a time to go.*

3. Do you think these forms of instructions work well? If so, why?

*Not always because sometimes children don't listen and carry on talking and making noise like with lining up.*

## Appendix L: RPP Interview 1 with Nora (10 December 2010)

1. How do you usually show the teacher that you need the toilet?

*I do the 'T' sign or I put my hand up and ask.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teacher sorts us out for different things, for example, writing groups and then tells us to go.*

- b. sit down?

*Our teacher asks.*

- c. quieten down?

*Our teacher does actions and we must copy, or she says it.*

- d. wash your hands and get ready for lunchtime?

*Our teacher asks us to go and wash our hands.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, but sometimes the children don't listen, so our teacher says the child's name. I don't like noise, because it's loud and then it's hard to listen and to hear what the teacher is saying.*

## **Appendix M: RPP Interview 2 with Alex (11 February 2011)**

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I use my finger on my chest.*

2. How does your teacher usually get you to:

- a. line-up?

*The teacher shows us the line-up sign.*

- b. sit down?

*She shows us the sign.*

- c. quieten down?

*She shows us the sign.*

- d. wash your hands and get ready for lunchtime?

*She does the washing-hand sign.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, because everyone has to watch carefully instead and it's less noisy.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *Signing because it is easy and quieter. Children listen really well now.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *All of them because they are good to have in the class. I'd like to learn some more.*

## Appendix N: RPP Interview 2 with Clara (11 February 2011)

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I move my finger up and down on my chest.*

2. How does your teacher usually get you to:

- a. line-up?

*Our teachers put their hands in a line shape.*

- b. sit down?

*Our teachers put their hands together pressing down.*

- c. quieten down?

*She shows us the sign for quieten down.*

- d. wash your hands and get ready for lunchtime?

*Our teachers show us the hand-washing motion and then the line-up sign.*

3. Do you think these forms of instructions work well? If so, why?

*Yes because people take notice and it's less noisy.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *I like signing because when people use their voice no-one listens properly. It is also less noisy. I like that.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I like the signs. I would like my teachers to use the quieten-down and line-up signs because it's less noisy like that.*

## **Appendix O: RPP Interview 2 with Emma (11 February 2011)**

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I rub my chest with one finger.*

2. How does your teacher usually get you to:

- a. line-up?

*The teacher shows us hands in a line.*

- b. sit down?

*She shows us the sign.*

- c. quieten down?

*By the quiet sign.*

- d. wash your hands and get ready for lunchtime?

*She does the hand washing action.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, because if your throat is sore you don't have to speak. We have to listen more carefully now and it's quieter.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *I like signing because children listen better because there is no voice.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I want to carry on using the signs. I hope my teachers do too because they are good.*

## Appendix P: RPP Interview 2 with Greta (11 February 2011)

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*When Miss Mottley is teaching us I use the sign she showed us or I put my hand up and ask.*

2. How does your teacher usually get you to:

- a. line-up?

*She signs two hands in a line.*

- b. sit down?

*She uses two hands in a sitting down motion.*

- c. quieten down?

*She shows us the quiet sign.*

- d. wash your hands and get ready for lunchtime?

*My teacher does the hand-washing action.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, the teachers don't need to use their voices so it is quieter and it makes us watch more carefully.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *Signing is better because it is quieter and easier. Lining up is less chatty.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I like doing the toilet sign and when Miss Mottley uses the other signs because they are fun and I like it when it is quieter. Children like the signs.*



## **Appendix Q: RPP Interview 2 with Jasper (11 February 2011)**

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I rub my finger on my chest.*

2. How does your teacher usually get you to:

- a. line-up?

*She shows us the line-up sign.*

- b. sit down?

*She uses hands in a sit down motion.*

- c. quieten down?

*She closes hand slowly so we are quiet.*

- d. wash your hands and get ready for lunchtime?

*She does the washing-hand action and the putting on coat action.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, because it is easier and quieter than before. We can listen better.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *Signing because it is always noisy when you use your voice.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I like all the signs and think I would like to use them with my teachers because everyone listens and watches carefully. It is quieter now.*

## Appendix R: RPP Interview 2 with Leo (11 February 2011)

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I mostly touch my chest using the special sign but sometimes I put my hand up.*

2. How does your teacher usually get you to:

- a. line-up?

*My teacher signs two hands in a line after saying the team number.*

- b. sit down?

*My teacher uses two hands in a pressing down motion.*

- c. quieten down?

*She shows the sign for quieten down.*

- d. wash your hands and get ready for lunchtime?

*Our teachers use the hand washing action then say group names.*

3. Do you think these forms of instructions work well? If so, why?

*They do work well because everyone does it, it's less noisy and we have to listen carefully.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *I like signing because it gets people to do things and there is no shouting out.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I really like using the sign for toilet and when my teacher uses the sign for hand washing because it is obvious what you want.*

## **Appendix S: RPP Interview 2 with Marco (11 February 2011)**

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*I use the sign we learnt.*

2. How does your teacher usually get you to:

- a. line-up?

*My teacher shows me the sign to line-up.*

- b. sit down?

*She shows us the sign.*

- c. quieten down?

*She uses signing.*

- d. wash your hands and get ready for lunchtime?

*She uses the hand washing motion and the motion for putting your coat on.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, because it is easier and quieter than using your voice all the time.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *Signing because you don't have to use your voice and people watch carefully.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I like the sitting down and quieten down actions because they work well. I like it when my teacher uses the signs because it is quiet and fun.*

## Appendix T: RPP Interview 2 with Nora (11 February 2011)

Early this term Miss Mottley taught us some signing as a way of communicating to each other without using our voices. Now we have a choice between using our voices and using signing.

1. How do you usually show the teacher that you need the toilet?

*Sometimes I use the sign and sometimes I put my hand up.*

2. How does your teacher usually get you to:

- a. line-up?

*My teacher shows Team 1 by showing one finger then the line-up sign.*

- b. sit down?

*She pushes one hand down on the other in a sitting motion.*

- c. quieten down?

*She uses her hand and slowly closes hand together.*

- d. wash your hands and get ready for lunchtime?

*She shows us the hand-washing action.*

3. Do you think these forms of instructions work well? If so, why?

*Yes, because it shows us what we need to do quietly.*

Think back to the last time you talked about these questions with Miss Mottley. Now think about the questions today and the signs we have been learning- which do you think is better? When we use our voices or when we use signing? Why? *I like signing but you would only be able to use it if you were taught the signs. There are some children who don't know what the signs mean so they wouldn't be able to know what to do.*

If your answer is signing: Which sign (s) will you carry on using and which sign (s) would you like your teacher to carry on using? Why? *I will use the signs and my teacher will too because they are good and quiet.*