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**Pupil perspectives on silence: the roles and meanings
of silence in the classroom**

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Abstract

This study aims to answer two key questions. Firstly do children perceive silence to have an influence on their learning? Secondly, what are their reasons for being silent in the classroom? Amongst rich evidence and research that encourages talk for learning, these questions focus attention on the purpose of silent time in the learning environment. Specifically, children's individual perspectives on silence for their learning are considered. In addition, the range of reasons for silence in the classroom is explored which can help inform teachers' understanding of these silences in the learning space.

Pupil perspectives on silence: the roles and meanings of silence in the classroom

Introduction

There is strong research supporting the use of talk for teaching and learning. Alexander (2008:9) states “Children, we now know, need to talk, and to experience a rich diet of spoken language, in order to think and learn. Reading, writing and number may be acknowledged as curriculum basics, but talk is arguably the true foundation for learning”. Therefore, a cultural bias towards talk has developed and this has meant that silence is commonly perceived negatively (Ollin, 2008). However, certain types of silence can be used effectively for teaching and learning (Ollin, 2008). With limited existing research in the area, particularly in the primary school environment, this essay will aim to investigate pupil perspectives on silence by finding out how Year Five children perceive silence in the learning environment. Specifically the research questions to be addressed are:

1. Do pupils perceive silence to have an influence on their learning?
2. What reasons are there for pupil silence in the classroom?

Literature Review

While OfSTED’s examples of good practice place high value on student participation and on proactive and observable interventions by the teacher (OfSTED, 2002), Ollin, (2008) considers a neglected aspect of teaching termed ‘silent pedagogy’ that structures teaching through silence rather than talk. Central areas represented by this pedagogy are the ways that learners interact or participate which are not manifested in talk or overt face to face engagement with others. It is noted that such interactions could be observed as passivity.

Vygotsky’s (1962) work on thought and language has had significant influence on the use of social interaction for the development of cognition in education. He stated that children needed to engage in social behaviour in order to maximize their potential for cognitive development (Vygotsky, 1962). Vygotsky also identified the process of maturation where cognition is internalised and is marked by a transition from vocalised cognitive processes to ‘silent’ inner-speech where thoughts

remain private and vocalisation is a matter of personal choice (Ollin, 2008). Vygotsky argued that the more complex the problem, the greater the importance of speech, however as the child grows older and gains experience, speech goes ‘underground’ transforming into an ‘inner speech’ for the construction of meaning (Hodson & Hodson, 1998). Vygotsky (1962), also made the distinction between “inner-speech for oneself and external speech for others”, it seems therefore that the two types of speech should both be given the opportunity to develop in the learning environment.

Li (2001) suggests that a bias towards talk can occur when participation in a group is criterion for valuation of student performance where silent participants, even if active and listening, would be considered non-participatory. However it seems that in line with social constructivist theory there is a place for silence for learning i.e. for silent inner-speech. Boler (2001) suggested three possible reasons why children may be silent in class apart from non-participation or disengagement. These are: because they are shy; because they are resistant to the dominant discourse of the setting; because they are involved in reflective, engaged silence. However, would these silences be observed as non-participation in an inspection for example? When actually the child may be processing, listening and learning, or engaged in an internal activity where the child can perceive or check the basis of their thoughts before sharing (Vygotsky, 1978).

Ollin (2008) found that there were a variety of uses of silence in the classroom including; for focus, ‘thinking time’ and ‘inter-spaces’. Inter-spaces were identified for reflection and to integrate thoughts. Participants emphasised the importance for these spaces to be free from intrusion of others ideas and to give them the opportunity to develop ideas for themselves. Ollin (2008) also found that the ‘silent learner’ may be thinking which can appear as non-contribution, they may need more time to think, or it could be that others were saying the same things they had thought of. Ollin (2008) concluded that when learners were silent they could be engaged in a variety of internal activity i.e. listening, cognitively processing, emotionally processing or emotionally withdrawing, and highlighted the importance of the skill of the teacher to identify which silence is present and respond accordingly. Boler (2001) states that in all instances the silent student can still be engaged and this can be interpreted by observation of body language, written expressions or one to one discussions with individuals.

Jaworski (1998), highlights that types of silence in the classroom may be facilitative to the learning process. He found that students believed that they were mostly silent when learning and he

suggested that while silence is perceived to be important for learning, teacher's expectations for learners to be more verbally active may be a potential source for anxiety and conflict for some students. This point highlights the need for teachers to be explicit in what they are looking for to see that children are engaged in the task. On reflection of the points made this may not always need to be verbal participation.

While there may be a variety of reasons for pupil silence, Ollin (2008) also identifies 'spatial silence' as an important time to give learners space to think or feel. The correlation between silence and thinking time were of great importance to all participants in Ollin's study and there was an evident link between silence and 'time to think', termed 'slow-time' by Bruneau (1973). Slow-time is defined as time where learners can think at their own pace rather than the pace of the rest of the class. This time was characterised as private time or space free from intrusion, interaction or demand for an immediate response (Ollin, 2008).

The benefits of slow-time and 'time to think' are consistent with Rowe's (1974) work on wait-time. Rowe, found that wait-time was a crucial element of questioning to encourage more thoughtful responses. By increasing wait-time to around three seconds Rowe observed dramatic effects on student involvement in classroom discussion e.g. more students contributing, longer student responses, students commenting on each other's ideas and a greater variety of ideas. Li (2001:160) suggests that teachers can utilise wait-time as they recognise it as an "essential temporal space for thinking and reflection". Others however may simply view wait-time as an outcome device in the current accountability movement. Either way there are clearly potential benefits to be aware of for teaching and learning.

Silence for reflection is supported further by Zen theory. Zen reflection embraces a mindful awareness of 'here and now' (Li, 2001). As language and speech are highly structured and regulated, undertaking in speech can easily act to distract engagement in such mindful and reflective process. As a pedagogical process, silence devoid of regulative linguistic structures, can be conducive for both teachers and students to raise awareness of 'here and now' (Li, 2001).

In other words, the pedagogical use of silence does not aim at soliciting any prescribed or desirable verbal responses, as implied in Rowe's study of wait-time. The pedagogical silence simply is facilitative to students to enter the mindful process of self-directed learning (Li, 2001).

Consistent with the use of silence for self directed learning Claxon (2006) discusses ‘thinking at the edge’ (TATE) which is based on a therapeutic practice of ‘focusing’ developed by Eugene Gendin, an American philosopher. The practise involves learning the knack of delicate inward attention where hazy, pre-conceptual ideas are given time to unfold into novel forms of talking and thinking. Recent work in neuroscience and immunology has revealed how intricately brain and body effect each other, so much so that they are better seen as a single integrated cognitive system. TATE is a systematic way to articulate in new terms something that needs to be said or written but is only at first an initial bodily sense (Claxon, 2006). It therefore follows that if we can create an environment where children are aware of their bodies and their environments (perhaps through mindfulness practise) then this may result in them finding their own ‘creative edge’. Claxon (2006) found that students who practiced an internal embodied ‘felt sense’ which one student described as “a place inside [where you can] just be yourself and release whatever thoughts and be what you are”. Claxon (2006) summarises that while teachers are familiar with the benefits of a few moments ‘quiet time’ TATE offers a more sophisticated version of inward attention that has the potential to coach students to use a general purpose tool for their own learning. In this way it has contributed to an enriched understanding of what ‘learning to learn’ involves and how it can be used effectively in schools.

In line with Claxon’s work, Li (2001) suggests that teachers need to be reflectively attentive to the process of teaching and learning. Silencing silence could have multiple harmful effects in educational contexts. It can devalue the multiple meanings of silence and importantly that it can ignore the value of silence as a reflective practise that can be rich and meaningful to the one who is silent (Li, 2001). Boler (2001) considers how ‘moments of silence’ in schools could be used to practice mindfulness. The silence of mindfulness is a practice which if cultivated would generally enhance the quality of interaction and thought that takes place in education. Caranfa (2006) highlights Plato’s teachings that true education must harmonise the life of the mind with the life of the body in order to produce a healthy individual. So it could therefore be argued that practicing mindfulness could be an avenue to explore to firstly benefit interactions between teachers and students, but to also improve the general well-being of children.

All about balance?

While it can be seen there is a value of silence in the classroom, classrooms are now often characterised by pupil talk and there is a danger of this resulting in insufficient time for reflective thinking (Stables, 1995). Stables (1995) suggests that in order for the best balance in class, teachers must be flexible in terms of classroom organisation and argues that for good learning the classroom must be organised on a collaborative basis for some of the time.

Stables (1995:61) states that theories of social constructivism have “often been inappropriately applied in terms of classroom methodology, resulting in an overemphasis on group work and peer group talk while insufficient attention has been paid to reflection and inner dialogue”. While Stables states that there “can be no doubt that all pupils do learn from discussing in small groups”, he believes that for group work to result in learning “there must be time for reflection”. Stables concludes that while discussion stimulates thought, it is also stimulated by thought, and a noisy classroom can be the worst place to think. With both sociability and solitude necessary for learning the teacher must therefore adapt to ensure that both can take place within the classroom (Stables, 1995). It therefore seems that with talk and silence both of value in the classroom they need to both be incorporated into the learning environment, and that teachers need to be careful to achieve the right balance and structure learning opportunities accordingly.

Research Design

Pupil consultation is an “opportunity to change some of the daily situations and strategies that get in the way of pupils learning and their commitment to learning” (Rudduck & McIntyre, 2007: 104). The main focus of the research was to investigate pupil perspectives of silence in their learning with a view to inform and improve future teaching practice. Specifically the study aimed to answer the following research questions:

1. Do pupils perceive silence to have an influence on their learning?
2. What reasons are there for pupil silence in the classroom?

The study took place in a rural Suffolk primary school within a Year Five class. It was observed in the weeks prior to the research taking place that individual and quiet work was common in the

classroom across subjects. In addition, class discussions were present at some point during most lessons, however pair and group tasks were less usual.

A mixed methods research approach was identified to investigate the area of study. The research comprised of an initial quantitative questionnaire, followed by qualitative semi-structured interviews. The triangulation of methods helped to enhance the validity of the study. By using different data collection methods and perspectives, findings can be confirmed. A mixed methods approach also helps to counterbalance threats from using one source of data only (Wilson, 2010).

Quantitative: Questionnaire

Without reference to a similar study with primary school children, the questionnaire was designed specifically for the purposes of the study. The questionnaire Jaworski (1998) used to study beliefs about silence in the classroom with secondary school children was however used as a guide and to support the validity of the method.

Bell (2006) suggests that all data gathering instruments should be piloted to check that all questions and instructions are clear and to enable the researcher to remove items that do not yield useable data. Therefore, an initial questionnaire was created and piloted with two children from another Year Five class in the same school. The aim of this was to highlight any issues with the questionnaire such as misunderstandings due to the language or structure of the questions. The responses to these questionnaires were reviewed and the comments the children made about the questionnaire implemented to improve the questionnaire for the subsequent research. Questions asked about the questionnaire can be referred to in Appendix 1. The responses were taken seriously, as getting the layout, length, structure and language of the questionnaire is vital as highlighted by Wilson (2010). Examples of the pilot questionnaire and actual questionnaire can be seen in Appendix 2 and 3 respectively.

The questionnaire language was revised to be more child appropriate, the layout incorporated more space and colour and the questions were reduced to avoid any overlap. This also ensured that only questions that directly contributed to answering the research questions were included.

A benefit of using a questionnaire is to achieve wide and inclusive coverage, and give a breadth of view (Denscombe, 2007). The questionnaire was used to efficiently enable access to all nine of the

children who had returned a completed permission slip. The quick response design also allowed access to the children's insights quickly and reduced demand on them to write their responses (MacBeath, Demetriou, Rudduck & Myers, 2003). Questions were predominantly closed to allow straightforward analysis, children were able to choose more than one answer if more than one applied to them, and there was an open option to contribute another answer if they wished. Due to the small number of respondents any additional answers have been easily incorporated into the results and analysis. The options for answer selection on the questionnaire were based on others that had been highlighted in previous studies (Stables, 1995; Jaworski, 1998; Boler, 2001; Li, 2001; Ollin, 2008,).

The closed nature of questionnaires demonstrates that a researcher may need to employ further methods, such as a semi-structured interview to gain full understanding of a given issue (Jupp, 2006), and therefore follow up interviews took place.

Qualitative: Interviews

From the nine questionnaire respondents, four children were interviewed. The interviews were used to gather detailed, qualitative descriptions and points of view from the children in relation to the research questions and also to triangulate the data (Wilson, 2010).

The semi-structured interview method provides the researcher with a clear list of issues to be addressed but offers the researcher the flexibility to change the order of the topics to be considered and also develop some topics in more depth (Denscombe, 2007). In addition the method can open up an issue and encourage longer, more reflective responses (MacBeath et al., 2003). The questions and transcripts can be referred to in Appendix 4.

Sampling

An opportunity sample from one Year Five class completed the final questionnaire. The sample comprised of nine children from the class of nineteen, whose parents had returned a research permission slip.

From the children who had completed the questionnaire, four were selected for interview. A representative sample of two boys and two girls were interviewed to explore some concepts in more depth.

Ethics

Ethics in research includes acting with honesty, integrity and within the law (Wilson, 2010). Bell (2006) also states that is about being clear about the nature of the agreement you have entered into with your research subjects and this can be done by getting informed consent. To ensure that the study would be ethical and appropriate consent obtained, the ethics checklist provided by University of Cambridge was completed which included consultation of guidelines from the British Educational Research Association (BERA, 2011). In addition, parent/carer consent forms had been completed for the children who took part in the research. Permission was also sought from the head teacher of the school.

Wilson (2010) identifies that it is important to establish trust and build confidence before research takes place. Therefore prior to completion of the interviews and the questionnaires it was communicated that the children’s views were important, that there were no right or wrong answers, and that there was a genuine interest to hear what they thought. The purpose of the research was explained; the children were given the opportunity to ask questions about the research and were given the opportunity to opt out at any point.

Research Findings

A full summary of the research results can be found in the appendices. Appendix 5 includes summary tables and charts to display results from the nine questionnaires. Appendices 4a-4d include the four coded interview transcripts. The interviews were coded using priori codes (Taylor & Gibbs, 2010). Themes relevant to the research questions were identified, and can be seen in Table 1 below:

Theme	Occurrence
Silence is time to think (T)	4
Silence to learn (SL)	5
Silence to concentrate (C)	9
Silence to get work complete (W)	5
Talk as a distraction (D)	5
Talk to help learning (TL)	15

Table 1: Identified themes

These themes will be drawn upon along with questionnaire results to discuss the findings in context of the literature review.

Do children value silence in the classroom?

Eight of the nine questionnaire respondents reported that they valued silence in the classroom ranging from it being ‘quite important’ to ‘very very important’, the results can be seen in Figure 1.

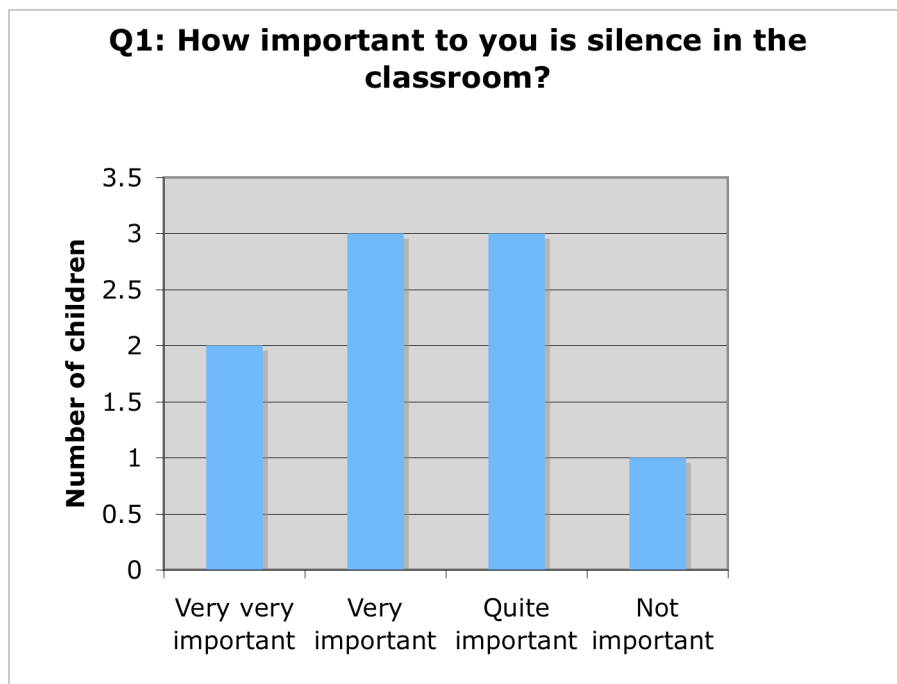


Figure 1: The importance of silence

The child that did not value silence in the classroom later confirmed during the interview that silence did in fact help her to ‘concentrate and focus’ (Appendix 4d, line 16). This finding was supported by the interview responses and identification of the theme ‘silence for learning’ that occurred five times during the interviews. An example of a response from interview can be seen below:

“I feel like I am learning when it is quiet, when we talk, I am not learning, people can interrupt you, and they might say something that is not right.” (Appendix 4d, line 20)

It therefore seems that silence in the classroom is valued by pupils, which supports Jaworksi (1998) who found that children in secondary school did value silence, specifically he found that children used silence for their learning.

Time to think

Question two from the questionnaire highlighted that two thirds of the children felt that the silence meant ‘time to think’ to them, this and the other responses can be seen in Figure 2 below:

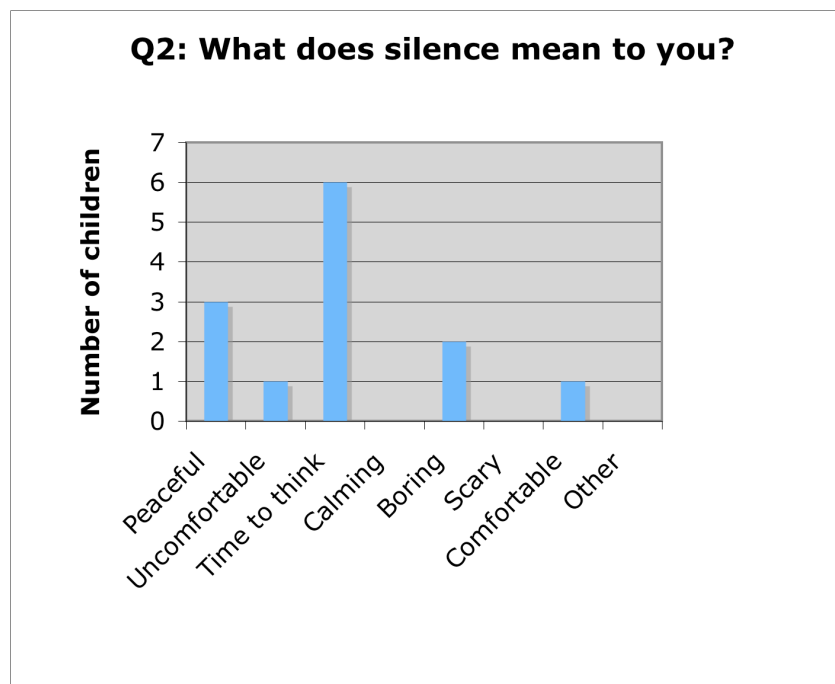


Figure 2: What does silence mean?

The questionnaire results were supported by the concept occurring four times amongst the four interviews. Specifically one child said:

“When it is quiet, I can think more clearly. It helps me to get my thoughts about what I am going to write or say next”. (Appendix 4b, line 6)

These findings are consistent with ‘inter-spaces’ identified and described by Ollin (2008) where silence in the classroom is used for focus and ‘thinking time’ which can be helpful for reflection and to integrate thoughts. The findings are also consistent with ‘slow-time’ identified by Bruneau (1973) where children have space to think at their own pace rather than at that of the rest of the

class. Time to think also characterises wait-time identified by Rowe (1974) who found that by increasing wait-time children had more time to think and give a more thoughtful reflective response.

In addition ‘time to think’ seems to have consistency with Vygotsky’s work on thought and language (1962), particularly the stage of maturation, where speech goes ‘underground’ and becomes inner-speech. If we can therefore assume similarities between inner-speech and time to think, then for these processes to take place most effectively, a silent environment on occasion could be conducive to more thoughtful reflective responses.

The responses ‘uncomfortable’ and ‘boring’ suggest that children do not always appreciate silence in the classroom, and the reasons for this could be investigated further in future research. It may help if the teacher clearly explained how silence could help them with their work or perhaps provided specific techniques such as TATE identified by Claxon (2006) for example. In addition if children are fully engaged with their work then they should not be bored. Responses such as these may be useful for teachers to reflect upon in order to improve their practice.

Does silence help children?

Question three in the questionnaire ‘Silence helps me to...’ revealed many positive responses in relation to silence, the results are summarised in Table 2 below:

	No. of responses
Concentrate	4
Listen	0
Learn	2
Focus	7
Problem solve	0
Form my ideas	4
Work hard	5
Avoid being asked a question	0
None of these	0

Table 2: Q3: Silence helps me to...:

The most common responses were; focus, concentrate, form my ideas and work hard. These responses to the question were supported by themes identified in the interviews i.e. ‘silence to concentrate’ occurring nine times ‘silence to learn’ occurring five times and ‘silence to get work complete’ occurring five times also. It could be argued that while working individually in silence, children are in fact in the process of self-directed learning without the input of others through talk, or other methods (Li, 2001). Li (2001) also suggests that speech can easily distract from one’s engagement in such a mindful, reflective practice. A response from the interviews that highlights this view can be seen below:

“ [silence] helps me to concentrate and think about what I need to write.” (Appendix 4c, line 18)

This response suggests an internal thought process and decision making is taking place before committing to paper.

Why are children silent?

The questionnaire also highlighted a wide range of reasons why children felt they were silent; these are listed in Table 3 below:

Response	Number of responses
Tired	4
Happy	1
Unhappy	2
Distracted	2
Thinking	5
Shy	2
Bored	4
Embarrassed	2
Scared	1
Nervous	2
Daydreaming	1
Other?	Focused 1

Table 3: When I am silent I am....

It should firstly be noted that children could provide multiple responses, this in itself identifies that silence can have many different meanings for pupils on different occasions. In turn this has clear implications for teachers in terms of how they interpret and respond to silence.

Some responses were consistent with Ollin (2008) and Li (2001) who found that children may be fully engaged even if they are not verbally expressing their thoughts i.e. four children identified that when they were silent they were thinking. Boler (2001) identified shyness as a reason for silence, this was supported by two children who confirmed that when they were silent they may be feeling shy. Resistance to dominant discourse was another reason identified by Boler, this was not directly supported, but being 'bored' was a reason that four children felt they may be silent. Further research could investigate whether being bored could in fact lead to active resistance to participation.

It must also be noted that there are a range of emotional reasons why children may be silent. Reasons highlighted in this study included children being tired, unhappy, shy, nervous, scared and embarrassed. Jaworski (1998) identified that perceived pressure to respond verbally can in fact lead to anxiety for some students which may be a form of nervousness being experienced by the child. Ollin (2008) found that silence could signify emotional withdrawal, which it could be argued may occur if the child was shy, nervous, bored, scared or unhappy – all reasons that were identified in this study. Further research would be required to investigate this possibility further.

There were few 'off-task' responses i.e. distracted, daydreaming or bored associated with silence which is consistent with Jaworski (1998) who suggested that children used silence in their learning. However, more research into these responses would provide interesting insights.

The wide range of reasons children are silent emphasises the need for the teacher to be aware and sensitive to child behaviour so that it can be interpreted correctly. It also has implications for assessment where OfSTED exemplifies good classroom practice by an environment where student's participation is highly valued (OfSTED, 2002).

How do children perceive they learn best?

Table 4 below summarises how children felt that they learned best:

	I learn a lot	I learn a bit	I don't learn much
Working on my own in silence	1	7	1
Working in pairs	7	1	1
Discussing things in groups	5	3	1
Discussing things as a class	5	4	0

Table 4: How do you learn best?

The majority of children felt that they ‘learn a bit’ from working individually in silence and we have discussed some of the reasons why i.e. to concentrate, to think and to focus. The outlying response of ‘I don’t learn much’ to this question was from the same respondent who felt that silence was ‘not important’ at all and also found silence ‘boring’ but later mentioned at interview that it helped her to focus and concentrate. The child that felt they ‘learnt a lot’ from working alone in silence also reported in the interview that when she was silent she was ‘thinking about what she needed to do’, she also commented that silence helped when:

“... I need to think really hard about my work, like in literacy, silence helps me to do better and get my work done.” (Appendix 4a, line 8)

The majority (eight out of nine) of the children felt that they learned ‘a lot’ or ‘a bit’ through working in pairs and groups as can be seen in Table 4.

The positive responses to learning in groups and pairs was further supported by the theme of ‘talk for learning’ identified in the interviews which occurred fifteen times between the four interviews. Also in support of talk for learning, all children valued class discussions and felt they learned ‘a lot’ or ‘a bit’ from these situations. Common explanations for this were that children felt they benefited from hearing lots of ideas and this helped them with their own work for example one child stated that:

“When we all discuss together, you hear what they are all saying and then think that...and understand.” (Appendix 4a, line 12).

The value that children place on talk for their learning is in support of Alexander (2008:9), who argues that “talk is arguably the true foundation of learning”. However, overall, the questionnaire results (Appendix 5, question 5) suggest that children perceive that they learn from a variety of ways including on their own in silence, in pairs, in groups and also from discussing things as a class. This is consistent with Stables (1995), who suggests that for the best balance, classroom organisation must be flexible and this should include organisation for collaboration for some of the time.

Can talk disrupt the silence?

Children’s responses regarding the value they placed on talk for learning was further supported by the answers to question six on the questionnaire (Appendix 5), with all except one child confirming that talk in class helped them to learn and/or helped them to understand. Again, this was supported by the recurring theme in the interviews ‘Talk to learn’. An interview with a child who felt that talk was just distracting and did not help her to learn or understand did state that discussing things as a class did actually help her with ideas (Appendix 4d, line 22). So it seems all children valued talk to aid their knowledge, learning and understanding at some level which is consistent with the work of Alexander (2008).

However, the theme ‘talk as a distraction’ was also identified, and occurred five times during the interviews. This perception is in line with Ollin (2008) who found that another person’s voice could act as ‘noise’ and intrude on an individual’s capacity to think. Stables (1995) also highlights that while “discussion stimulates thought, thought also stimulates discussion and a noisy classroom can be a difficult place to think”. Claxon (2006) found that TATE techniques could help students more carefully focus attention inwardly for the benefit of their own learning. In support of this awareness of their own learning, Duncan et al. (2007) found that there is a positive overall relationship between self-regulation and academic achievement and that children and young people with more adaptive personal skills and learning resources are more likely to succeed academically. This work further supports the point that by giving children the techniques they need, they can help themselves to learn more effectively.

Silence to get work completed

The interviews also highlighted a theme on a topic that was not necessarily directly linked to learning but more to being a conscientious student i.e. children may perceive talk getting in the way of getting their work done. In interview/Appendix 4a (line 2, line 16) and interview/Appendix 4c (line 2, 4 and 16), both children highlighted this concern. This could be an area for further research as perhaps some children may value getting work ‘complete’ over a discussion that could in fact support their learning.

To summarise the findings in relation to the research questions:

1. Do pupils perceive silence to have an influence on their learning?
2. What reasons are there for pupil silence in the classroom?

It seems clear that children do value silence in their learning for a variety of reasons including to concentrate, focus, think and form their ideas. These findings have been related to theories such as Vygotsky’s inner-speech, wait-time identified by Rowe (1974) and time for thoughtful reflection discussed by Ollin (2008).

Meanwhile, it is also clear that children value talk for learning. It seems therefore that balance is what is required. For example while talk can be of huge benefit to learning in line with Alexander’s (2008) findings, it can also be a distraction to those who are trying to find inner silence, or an ‘inter-space’ (Ollin, 2008), where children can concentrate or think, further emphasising the value that children can place on silence.

There also seems to be a huge variety of meanings of silence to children, it may be linked to their learning as mentioned above, but other reasons could inhibit children’s responsiveness to learning e.g. being unhappy or nervous. Teachers must therefore be sensitive to these silences and respond accordingly to create an engaging learning environment for all.

Analysis of the Research Design

Using qualitative and quantitative methods enables the researcher to explore from more than one standpoint and therefore explain findings more fully (Cohen, Manion & Morrison, 2007). Therefore

a mixed methods approach was appropriate for this study. For example, it was possible to find out in more detail why and when some children valued silence in the classroom through the interview process. The mixed approach also allowed concepts to be explored further, for example one child who had said they did not value silence on the questionnaire later reported that silence was in actual fact useful in her learning (Appendix 4d). However, it could be “argued that there is a tendency for people to give researchers socially desirable answers rather than honest responses in face to face interviews” (Hammersley, 2008). Instances such as this further support the use of triangulation of methods to view things from more than one perspective, and therefore provide a better understanding of what is being investigated (Denscombe, 2007). In this specific case a discrepancy was highlighted and would suggest further research is required to improve validity.

Denscombe (2007) suggests that decisions about the length of the questionnaire are ultimately down to the judgment of the researcher. Considerations such as the nature of respondents and the time to complete are key in the design of a questionnaire. These were taken into account in the questionnaire design. However on reflection the Year Five group would have engaged for longer and more questions could have been included to gather additional data which may have provided more insights for analysis in relation to the research questions.

The semi-structured interviews that followed the questionnaire helped to explore some concepts in more depth. As Bell (2006) suggests, they provide the interviewer with the opportunity to follow up ideas, probe responses and investigate motives and feelings that is not possible from a questionnaire. For example it was possible to explore in more detail when talk is helpful and when can it disrupt the inner thought process.

Validity

The validity of a study tells us whether an instrument of measure, provides credible conclusions (Bell, 2006). If an existing credible questionnaire had existed to investigate pupils’ perceptions of silence in the learning environment then this would have increased the validity of the study. However, without an existing measure, the pilot questionnaire and subsequently gaining valuable feedback from the children who completed it helped improve the validity. Bell (2006) highlights the importance of trialling questionnaires to ensure the wording and layout is appropriate to ensure smooth data collection.

A potential issue to be considered is whether the questionnaire could have resulted in desirability issues with children perhaps responding in a way the researcher wanted them to rather than reflecting their actual opinions (Hammersley, 2008). However actions were taken to attempt to minimise the possibility, i.e. by explaining before the research that there were no correct answers and expressing a genuine interest in the participants' thoughts.

With regards to the interview interpretations, we can ask 'would another researcher come to the same conclusions?' (Bell, 2006). The interpretations could have therefore been trialled with a colleague to see if the same conclusions were made. Again, this would have increased the validity of the study.

Reliability

Would a researcher obtain a similar picture on different occasions with the same methods? (Bell, 2006). In the case of this study, confounding variables such as the level of silence or talk in children's learning immediately prior to or recently before the study may have influenced responses to the research. To test the reliability of the study, it would therefore also need to be carried out in other settings at different times. Alternatively or in addition, lessons or activities could be designed incorporating silence, talk and discussion and the research could take place immediately afterwards and in relation to those experiences.

Sampling

A self-selected opportunity sample of children whose parents or carers had returned the completed parental consent forms took part in the study. It could therefore be argued that the sample were not truly representative of the entire population of children (Jupp, 2006). In addition, a larger and more credible sample would have produced more significant results. Denscombe (2007) highlights that with a larger sample it is less likely that the findings will be biased, and there will be some balance between the proportions within the sample and the proportions, which occur, in the overall population being investigated.

However, in a small-scale research project such as this it can be difficult to draw generalisations and ensure that the sample is truly representative. As Bell (2006:18) states "all researchers are

dependent on the goodwill and availability of respondents, and it will probably be difficult for an individual researcher working on a small-scale project to achieve a truly random sample”.

While the validity and reliability of the study could both have been improved it should be stated that the purpose of the study was to firstly contribute to an area of study where work is currently limited in primary schools. Secondly the study took place to provide opportunities to gain insight and reflect on my own teaching practice. The following section will outline the implications this study will have for my future.

Implications

There are three broad areas of implication from this study that will inform my future teaching practice. These are: identifying time for silence in the classroom, being sensitive to pupil’s silence in the classroom, and thirdly, the overall benefits of consulting pupils about their learning.

Time for silence

The existing literature and the results of this small-scale study suggest that there is a place for silence in the classroom for thinking, learning, reflecting and focusing for example. Ollin’s work (2008) strongly supports this and she suggests that the implications of Vygotsky’s work on inner-speech where thinking is internally verbalised not externally vocalised could be taken into account and planned into lessons perhaps as ‘slow-time’ (Bruneau, 1973).

It is also useful to reflect on the use of talk in the classroom. At a time where talk is a dominant culture (Stables, 1995), it is important to ensure that talk techniques are used when it is appropriate for the learning task. To avoid talk leading to distraction, it is vital that children understand the importance of their discussion and teachers must provide children with the language tools they need to think and learn through talk (Loxley, Dawes, Nicolls & Dore, 2009). I think it is also important to balance time to talk with time for quiet work where children can develop their ideas, reflect and concentrate fully. For more significant benefits, specific techniques of mindfulness (Boler, 2001; Li, 2001) could be practised and also strategies such as TATE as identified by Claxon (2006) which could help self-directed learning.

Meanings of silence

It is apparent that there can be a vast number of reasons for children to be silent, Li (2001) fundamentally argues that educators should not silence silences because to privilege speech ignores and overlooks the complex meanings of silence. Some children may be learning or thinking but there are a broad range of other possibilities that have been considered and it is therefore necessary to be sensitive to these possibilities. Through observation and good relationships with the children I would hope to be able to identify different types of silence and respond accordingly.

From a broader perspective it should also be noted that there are clear cultural differences regarding silence as noted by John (1972). John (1972) found that children in Navajo were more likely to learn from silently observing the surrounding world while Euro-American cultures tend to recognise and accept speech as a legitimate and desirable form of educational interaction. It was concluded that in western cultures where language skills were cultivated and tested, it was easy to underrate Navajo children's cognitive abilities. While this is one cultural example, it clearly could have implications for assessment for learning in multi-cultural classrooms.

Benefits of consulting pupils

It is important to recognise the insights gained from this research study, but also the benefits of the pupil consultation process. Rudduck and McIntyre (2007:1) suggest that "Pupil consultation can lead to a transformation of teacher-pupil relationships, to significant improvements in teachers' practices, and to pupils having a new sense of themselves as members of a community of learners". Alexander et al. (2010) also echo the point that one of the most common uses of children's voices is as a means for teachers to obtain feedback on their teaching. It is therefore clear to see the value in consulting pupils as part of continued professional development.

In a broader context Flutter (2007) found that a sustained programme of pupil consultation also served to create a more positive learning culture within the school as a whole. In summary, it seems that pupil consultation can become a key part of ongoing relationship building between a teacher and their class and is valuable to help improve children's learning. In addition it can help inform innovation of teaching methods and create an open and supporting culture within the wider school environment.

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Appendices

Appendix 1: Pilot questionnaire questions (Bell, 2006)

Were the instructions clear?

Were there any unclear questions? If so, which ones and why?

Were there any questions you did not want to answer?

Was the layout of the questionnaire clear and attractive?

Any other comments?

Appendix 2: Pilot Questionnaire

Silence Questionnaire

About you!	
Name: _____	Age: _____ years old
Class: _____	Male Female (please circle)

Section 1: Silence in the classroom

1. How important to you is silence in the classroom generally?

(please circle your answer)

very very important very important quite important not important

2. Circle the word that you agree with for each sentence:

Children are generally silent in the classroom	Never	Sometimes	Always
I am generally silent in the classroom	Never	Sometimes	Always
I prefer the classroom when it is silent	Never	Sometimes	Always

3. When children are silent in the classroom it means they are (circle all that apply)

Learning	Disobeying teachers	Listening
Shy	Distracted	Concentrating

Other (please write your answer here) _____

4. I am silent in the classroom when I am:

(please circle your answer either agree, disagree or neither)

Learning	Agree	Disagree	Neither
Disobeying teacher	Agree	Disagree	Neither
Feeling shy	Agree	Disagree	Neither
Distracted	Agree	Disagree	Neither
Tired	Agree	Disagree	Neither
Unhappy	Agree	Disagree	Neither
Happy	Agree	Disagree	Neither

Other (please write your answer here) _____

Section 2: Silence and learning

5. Circle the word that you agree with for each sentence:

Children are generally silent when they are learning	Never	Sometimes	Always
I am generally silent when I am learning	Never	Sometimes	Always
Children generally use silence in learning and task solving	Never	Sometimes	Always
I generally use silence in learning and task solving	Never	Sometimes	Always
Children generally use talk in learning and task solving	Never	Sometimes	Always
I generally use talk in learning and task solving	Never	Sometimes	Always

6. Here are some different ways of learning in lessons; circle the number that describes how much you learn from each activity:

	I learn a lot	I learn a bit	I don't learn much
Working on my own in silence	1	2	3
Working in pairs	1	2	3
Discussing things in groups	1	2	3

Thank you for completing the questionnaire ☺

Appendix 3: Final Questionnaire

1) How important to you is silence in the classroom? (Circle your answer)

very important very important quite important not important

2) What does silence mean to you? Silence is...
 (Circle the answers you agree with)

Peaceful Uncomfortable Time to think Calming

Boring Scary Comfortable

Other? _____

3) Silence helps me to: (Circle the answers you agree with)

Concentrate Listen Learn Focus Problem solve

Form my ideas Work hard Avoid being asked a question

None of these

4) I am silent when I am: (Circle the answers you agree with)

Tired Happy Unhappy Distracted

Thinking Shy Bored Embarrassed

Scared Nervous Day dreaming

Other? _____

5) Here are some different ways of learning in lessons. Circle the number that describes how much you learn from each activity:

	I learn a lot 😊	I learn a bit	I don't learn much 😞
Working on my own in silence	1	2	3
Working in pairs	1	2	3
Discussing things in groups	1	2	3
Discussing things as a class	1	2	3

6) Talk in class (Circle the answers you agree with)

Helps me to learn Is distracting Makes it difficult for me to think

Helps me to understand Is frustrating Other? _____

Thank you for completing the questionnaire 😊

Appendix 4: Semi-structured interview questions

You mentioned that silence was _____ important to you in the classroom. What do you mean by that? Why?

Do you think silence affects your learning? / When do you find silence useful for learning?

How does silence help you _____?

When do you learn more; through talking in pairs/groups or on your own in silence?

Is there anything you don't like about silence in the class?

Does talking, discussing in class help you to learn?

Do you prefer working in pairs/groups or alone?

Why?

In general, would you like more discussion or more silence in the classroom? Or is it just right?

Why?

Would this help you to learn more?

Appendix 4a. Interview A

R: You mentioned that silence was very very important to you in the classroom. Why is that?

P: Silence is important to me to get my work done. It's important to get my work done. (W)

R: Do you think silence affects your learning?

P: It is a little bit difficult to get my work done if others are talking, sometimes it's distracting. (D)

R: When do you find silence useful for learning?

P: When I am silent I am thinking about what I have to do. (T)

R: You mentioned that you find silence is time to think, what do you mean by this?

P: When I need to think really hard about my work, like in literacy, silence helps me to do better and get my work done. (W) (T)

R: Does talking help you to learn?

P: Sometimes it's helpful to talk to learn and sometimes I like to work alone. (TL) (SL)

R: When is it helpful to talk to others?

P: When we all discuss together, you hear what they are all saying, and then think that...understand. (TL)

R: Do you learn more in pairs and groups, or on your own?

P: I learn more in pairs than on my own and even more in a group than on my own because then you know what they are discussing. In a pair you only hear a little bit. In a class you get more discussion so I learn more. (TL)

R: Is there a time in the lesson when silence is most useful?

P: After talking, when we have to do our work, it's better if it's quiet so I can concentrate. Sometimes I have to say my sentences in my head before I write them down so they make sense. (C) (W) (T)

Deans, C.

R: Is there anything you don't like about silence in the class?

P: No, I don't mind if the class is quiet.

R: In general, would you like more discussion or more silence in the classroom? Or is it just right?

P: I would like there to be more discussion in the class, to know all the ideas, so you can think yourself, so you know what to do... (TL)

R: Do you think discussing things more would help you learn more?

P: Yes (TL)

Appendix 4b: Interview B

R: You mentioned that silence was very important to you in the classroom. What do you mean by that?

P: Silence helps me to concentrate. Sometimes talking can make me think about things that I shouldn't be thinking about. (C) (D)

R: Do you think silence affects your learning?

P: Silence, silence helps me to learn most of the time. Talking can help [me to learn] some of the time, I like people talking about a subject that we are learning about. (SL) (TL)

R: You mentioned that silence is time to think. What did you mean by this?

P: When it's quiet, I can think more clearly. Its helps get me thoughts about what I am going to write or say next. (T) (C)

R: You highlighted that talking in class helps you to understand, what do you mean by that?

P: Talking can help you to understand what's happening in the lesson. I am prone to occasional daydreaming, so sometimes might not know what to do. (TL)

R: Is there anything you don't like about talk in class?

P: Some views I don't think are right, but when I say I don't think they are right, I don't like people to get upset.

R: Do people get upset?

P: Yes like with 'A' earlier.

R: Ah, yes.

R: Are there times when you don't like silence in class?

P: When I don't understand what I should be doing I wish I could talk. So then I will ask on my table for help. (TL)

R: Are there times when you don't like talk in class?

P: It worries me if there is too much talk if it is chatter, but it's okay if it's about what we are doing. If not I worry I won't get my work done. (D)

R: When does silence help you to learn most?

Silence is more helpful in subjects I know about. (SL)

R: Like what?

P: Like story writing, column addition or any ICT. But talk would be helpful for hard maths, like column multiplication or news report writing in literacy. (TL)

R: How does talk help you most to learn?

P: Pairs and groups are most helpful, they are the same. They are talking on task and get the attention of the others on the subject. Sometimes I might still be in a bit of trouble after group work, but it doesn't happen very often that I don't understand the subject. (TL)

R: In general, would you like more discussion or more silence in the classroom? Or is it just right?

P: More talking would help me learn more for subjects that I don't know much about e.g. Tennis and others I mentioned before [column multiplication, news reports in literacy]. Other subjects where I am confident, I can get on with it so I don't need to talk. (TL) (SL)

Appendix 4c: Interview C

R: You mentioned that silence was quite important to you in the classroom. What do you mean by that?

P: Well it is sometimes important, sometimes we need to be quiet to get on with our work. (W)

R: Do you think silence affects your learning?

P: Not really, I think we need it to get work done. (W)

R: Do you learn more through talking in pairs/groups or on your own in silence?

P: I don't like working in groups, like earlier in science, when I said something the others didn't agree.

R: But we don't always need to agree, do you not find it helpful to share ideas?

P: But I was so sure I was right, and they wouldn't listen, and then it turned out they were right, but I was so sure and then I got upset. (D)

R: Could you then see why the alternative answer was correct when we discussed evaporation as a class?

P: Yes, but I didn't like that my group told me I was wrong. I don't like working with those people. [we later discussed this specific issue with A]

R: What about working in pairs and discussing as a class, do you find this helps your learning?

P: Yes, I learn when we discuss things as a class, you can hear lots of ideas and the teacher lets you know what is right and wrong. (TL)

R: You mentioned that you find silence boring, what do you mean by that?

P: It's just boring, it much more enjoyable when we can talk about our work.

R: Is there any time when you like it to be silent?

P: I suppose sometimes, when I have lots to do and I need to get it done before break. (W)

Deans, C.

R: How does silence help you?

P: It helps me to concentrate and think about what I need to write. (C)

R: When the class is silent generally how do you feel?

P: I don't mind it, but sometimes I worry if I don't know what to do.

R: But could you put your hand up and ask?

P: Yes, I do, but sometimes I get in trouble for not listening.

R: In general, would you like more discussion or more silence in the classroom? Or is it just right?

P: I would like more talk in the classroom, I like to discuss things and talk them through. But when we have lots of work to do silence means we can do that. (TL) (C)

Appendix 4d: Interview D

R: In your questionnaire you said that silence was not important, why is it not important?

P: Silence is not important because it's boring.

R: Why is it boring?

P: It just is

R: Does talking help you to learn?

P: I learn through listening, not talking.

R: You mentioned you learn more working with others than on your own. Is that always true?

P: Sometimes its easier to learn working on your own

R: When is it easier?

P: Like when you are doing a SATs paper and you need to concentrate. (C)

R: When is talk helpful to your learning?

P: Talk is helpful when you are stuck on something, like in literacy. (TL)

R: Is it helpful to then talk in a group?

P: Yes, discussing as a group you get more ideas, and learn a bit more [than on your own] (TL)

R: When is silence useful for your learning?

P: You can concentrate easier and focus. (C)

R: What do you mean by focus?

P: It helps to concentrate and get on with your work, and do well. (C)

Deans, C.

R: Do you feel like you learn more when it's quiet then?

P: I feel like I am learning when it is quiet, when we talk, I am not learning, people can interrupt you, and they might say something that is not right. (D)

R: Do class discussions help you to learn?

P: Discussing things as a class helps with ideas. (TL)

R: How do you feel when the classroom is quiet?

P: No, I don't ever want it quiet.

R: Why?

P: I don't know.

R: Is quiet never helpful?

P...sometimes it can help me concentrate. (C)

R: Coming back to talk, you mentioned that you find it distracting

P: It is, when you just need to get on and think about what you need to do.

R: In general, would you like more discussion or more silence in the classroom? Or is it just right?

P: It's about right.

Appendix 5: Questionnaire results summary

Respondents	N = 9
Boys	4
Girls	5
Year 5 - all aged 9-10 years old.	

Q1: How important to you in silence in the classroom?

Very very important	Very important	Quite important	Not important
2	3	3	1

Q2: What does silence mean to you?

Peaceful	3
Uncomfortable	1
Time to think	6
Calming	0
Boring	2
Scary	0
Comfortable	1
Other	0

Q3: Silence helps me to:

	No. of responses
Concentrate	4
Listen	0
Learn	2
Focus	7
Problem solve	0
Form my ideas	4
Work hard	5
Avoid being asked a question	0
None of these	0

Q4: I am silent when I am..

	No. of responses
Tired	4
Happy	1
Unhappy	2
Distracted	2
Thinking	5
Shy	2
Bored	4
Embarrassed	2
Scared	1
Nervous	2
Daydreaming	1
Other?	Focused

Q5: Here are some different ways of learning in lessons. Circle the number that describes how much you learn from each activity:

	I learn a lot	I learn a bit	I don't learn much
Working on my own in silence	1	7	1
Working in pairs	7	1	1
Discussing things in groups	5	3	1
Discussing things as a class	5	4	0

Q6: Talk in class...

	No. of responses
Helps me to learn	3
Is distracting	0
Makes it difficult for me to think	2
Helps me to understand	6
Is frustrating	0
Other	Helps me think