An Exploration of Social Communication in the Clinical and Educational Context

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Acknowledgements

Table of Contents

List of Tables

List of Figures

List of Appendices

Abstract

Introduction

The term 'social communication' is used within UK health and education services across a number of professional groups. However, it is unclear what social communication is and how professionals should address the needs of children and young people described as having social communication deficits. This thesis explores the understanding and use of the term 'social communication' in clinical and educational contexts.

Method

A broadly phenomenological approach was adopted in this mixed methods study to consider professionals' views regarding the concept of 'social communication'. Five data sets were collected and triangulated. A pilot focus group explored what Speech and Language Therapists (SALTs) mean by the term. A survey across three professional groups, teachers (n=35), Educational Psychologists (n=21) and SALTs (n=37) gathered wider perspectives. Focus groups with SALTs allowed a more detailed exploration from the perspective of a single profession. Semi-structured interviews enabled an in-depth investigation of specific assessment and intervention models. A concurrent systematic synthesis of the literature established current research conclusions regarding the phenomenon. A variety of analytical approaches was used across all five data sets to develop a synergistic overview of views regarding social communication.

Results

The synthesised data generated a conceptual framework incorporating 17 sub-themes which fell into three overarching themes: terminology, aetiological considerations and assessment, intervention and outcome factors.

Conclusions

Social communication is a complex concept that can be described rather than defined, but a greater understanding of the concept informs models of assessment and intervention relevant to the needs of individual children. Intervention should be individualised and it is essential that 'context' is prioritised. Models to support the assessment and intervention process are presented and implications for future research and practice are discussed.

1 Chapter One - Introduction

For many years leading up to the start of this study I had worked in specialist educational provision for secondary school age pupils with learning difficulties. The pupil population of the school evolved and, although when I first began my work the school catered for pupils with moderate learning needs and associated difficulties, it changed to providing for pupils with speech, language and communication needs (SLCN) including those designated as having 'social communication' difficulties. This research study developed from the need to explore the evidence base for intervention models in the area of social communication and the desire to examine the effectiveness of my own therapy. In an attempt to consider effectiveness, I exposed uncertainties, reservations and questions regarding the appropriateness of interventions. A high percentage of pupils in this provision experienced social communication deficits. Olswang, Coggins and Timler (2001:50) state that *"Speech and Language Pathologists find themselves increasingly challenged by a population of school-age children who have difficulty managing social situations"*. This was reflected in my own clinical practice.

In my clinical experience the term 'social communication' is used in professional documentation relating to pupils, for example, Statements of Special Educational Need, care plans and clinical reports. Although many pupils attending the school demonstrated social communication needs, the underlying cause of such needs varied from child to child. An extensive search of the literature has provided some insight into these underlying causes and this will be discussed in the literature synthesis, Chapter 4 (4.3.2). Communicating Quality 3 (2006) provides guidelines for Speech and Language Therapists (SALTs) working with clients with Autism, Learning Difficulties, Specific Language Impairment (SLI) and Social Emotional Behavioural Difficulties (SEBD) all of whom experience some degree of social communication impairment. However, there are no clinical guidelines outlining desirable amounts or type of provision for children and young people with social communication difficulties *per se*. In order to provide clarity to develop my own intervention I focused my knowledge and experience from my own working practice to enable me to categorise the pupils according to their social communication needs. I divided the pupils into three sub-categories of social communication deficits as follows:

- Immature or delayed social communication; this is where a child has delayed skills across all areas of development, for example, a generalised or global developmental delay and their social communication is commensurate with this.

- Atypical social communication; this is where a child exhibits a developmental profile with areas of strength and areas of weakness but their social communication is unusual.

- Social communication secondary to other needs; this is where a child's primary area of difficulty is with emotional or behaviour management or a specific language or learning difficulty and as a result social communication is affected.

As a Speech and Language Therapist it was my job to assess and provide intervention to improve a child's communication skills. Notwithstanding the underlying cause of the social communication deficits, I assumed it was best practice to try to teach social communication skills in a group setting with other children of a similar age. I did not establish a theoretical underpinning to providing such an intervention model but I used my therapeutic skills and knowledge (which have a theoretical basis) to formulate my professional judgement in implementing what I felt was appropriate intervention. My social communication sessions were very popular with the pupils and the teaching staff who supported the sessions. I felt that there was significant progress made by the pupils in the sessions and that the model of intervention was appropriate and effective. However what evidence was there to support this? Sackett, Richardson, Rosenberg and Haynes (2000:1) state that *"Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values."* These three fundamental principles of evidence based practice indicate that improved patient outcomes are driven by:

- Clinical expertise
- Patient values and expectations
- Best available clinical evidence from systematic research

If these three principles were applied to my own clinical work it would demonstrate that there was one area significantly lacking. I had clinical expertise, the pupils and teachers valued the sessions but I was not applying the best available clinical evidence, in fact I was not aware of what evidence was available. This concept is reinforced by the views of Adams, Lloyd, Aldred and Baxendale (2006:41) *"Practitioners are confident that the*

results of interventions are positive, but this has not been demonstrated robustly and explicitly enough to argue confidently for resources".

As I embarked on examining my model's effectiveness it highlighted so many other issues surrounding the topic. Where did I get the term 'social communication' from? What does it mean? Is it equivalent to the term pragmatics? What do other SALTs do to address such issues? Do all children with social communication deficits respond and improve with intervention and if so what intervention?

I decided that the only way to increase the evidence base that informed my own practice and address the issues I was facing was to explore specific research issues. I thought that the best way to do this was to design and implement a specific intervention study. It soon became apparent, however, that the logistics of organising a comparative, controlled intervention study within the remit of a special school setting would be unmanageable. The student population varies from term to term. Due to the inflexibility of the timetable within a school the possibility of organising assessment, intervention and further assessment would have been extremely difficult. Also an intervention study would not address the wider issues concerned with terminology, best practice, best intervention models for children with social communication difficulties and best available clinically relevant research.

A preliminary search (prior to formal search strategies) of the literature and therapy resources failed to provide me with a workable definition of social communication that could be applied to my clinical working practice. For example, when the term social communication was inputted to the "Google" search engine, lots of non-research based information became available. However, no academic research based literature seemed to address the term in isolation but only as part of other developmental conditions, for example, autism.

In order to see what a lay definition of the term might be, I searched Wikipedia for a definition of social communication:

> *Social communication is a field of study that primarily explores the ways information can be perceived, transmitted and understood, and the impact those*

ways will have on society. Thus the study of social communication is more politically and socially involved than the study of communication. http://en.wikipedia.org/wiki/Social_communication (accessed 10th June 2003).

This definition is difficult to apply within a clinical context. To take politics into consideration, even in the widest sense, does not fall comfortably within the context of assessment and remediation of deficits in skills for children and young people. This led me to a further investigation of the term 'social communication' in professional and parental discourse.

A website for teachers, www.teachingexpertise.com/articles/activities-to-develop-social-communication-skills-pragmatics-2573 (accessed 10th June 2003) links with the term pragmatics. One section is titled, "Activities to develop social communication skills (pragmatics)". This title indicates that pragmatics and social communication are being viewed as synonymous.

A well-known parental support website www.mumsnet.com (accessed 10th June 2003) includes a forum where the following comments were posted as part of a conversation surrounding the subject of social communication disorder.

Person A   *Is social communication a new term for Asperger's or Autism?*

Person B   *Here is my cynical view. "Social Communication Disorder" is what children are often given as a label instead of ASD or Autism, simply because it isn't a proper diagnosis and it means it will be harder for the child's parents to make the Local Authority cough up the resources that the child needs.*

Person C   *I am a SALT (Speech and Language Therapist) and I have a child with a communication disorder. This 'label' has been put on her proposed statement and I have revised it to say 'has difficulties with communication and social interaction' as I also suspect dodgy dealings. It means f*** all anyway, just another way of saying there are difficulties with these areas. I do wish everyone would stop using medical style names for communication difficulties.*

Person D   *It sounds to me as if the term social communication disorder can mean so many different things. It is like saying a child has a physical disability without telling you much more.*

This conversation reinforced my impression of the level of confusion regarding the area of children and young people experiencing social communication deficits. My initial desire to investigate the effectiveness of the intervention model that I apply within the context of the educational setting, led to the development of many other questions:

- Is it possible to define, describe or profile social communication?
- Where does social communication fit within models of language/communication development?
- What are the underlying causes of social communication deficits and are they important in treatment?
- How are social communication skills measured, what interventions are used and what are the outcomes of such interventions?

These questions highlighted the complexity of the phenomenon 'social communication'. In this research I have set out to make sense of this phenomenon and in doing so I have generated a conceptual framework. These concepts are not to be viewed as research aims but as guidance for data collection and the process of conceptualisation. This will be discussed further in Chapter 2, Methodological Considerations.

Rather than starting with a specific research question or hypothesis that precedes the data collection, this research went backwards and forwards between the raw data and the process of conceptualisation, thus making sense of the data throughout the period of data collection (Pope & Mays 1995). However, for the purpose of writing this thesis a structure has been imposed to help the reader to follow the research journey from design through to data collection and analysis.

To evaluate or critically appraise research articles using, for example, a method for SALTs described by Reid (2010) did not seem sufficient for the purpose of this study. In some respects, my analysis of the literature culminated in a synthesis of relevant data via a method of thematic analysis as opposed to a review or critique of the articles. It can, therefore, be considered as part of my method of data collection; contributing to conceptualising the phenomenon 'social communication'. This will be described in detail in Chapter 4.

This thesis is presented in nine chapters. Chapter 1 has included an explanation of the purpose of this thesis, including information about me and my motivation to do this study. Chapter 2 then sets out the study design and will discuss the methodological considerations, including competing options and a rationale for the choices made. Chapter 3 explains the choice of methods and identifies ethical considerations, discusses issues of research rigour, and describes the data collection process. Chapter 4 describes the evaluation of the literature and how it culminated in a synthesis of relevant data. It outlines the thematic analysis undertaken and discusses the content of the literature synthesized. Chapters 5, 6, 7 and 8 outline the findings from four different data sets. Chapter 5 outlines the findings from the pilot study and Chapter 6 outlines the findings from the survey of teachers, EPs and SALTs. The themes generated from the focus groups with SALTs are outlined in Chapter 7 and Chapter 8 builds on these findings and reports the themes generated from the semi-structured interviews with SALTs. The final chapter, Chapter 9, discusses and integrates the findings from all the data collected, initially in its own right and then in relation to previous research. It explores how this enquiry makes an original contribution to knowledge, and includes the limitations of the study, implications for theory and practice and ideas for the future research.

2 Chapter Two - Methodological Considerations

2.1 Introduction

As the researcher setting out to study the phenomenon 'social communication', I found it confusing how to determine what paradigm, theory, tradition or methodology it was best to adopt in order to ensure an appropriately designed empirical study, together with a well-designed analytical framework. I found Denzin and Lincoln's comment to be significant in that *"Qualitative research has no theory, or paradigm, that is distinctly its own"* (1998:5). They state that *"Qualitative research, as a set of interpretive practices, privileges no single methodology over any other"* (Denzin & Lincoln, 1998:5).

During the process of familiarising myself with the options regarding research methodology it became apparent that different authors used diverse ways to categorise different methodological considerations.

> *The debates on the philosophical foundations of research can be complex, sophisticated and intellectually challenging. The language in which the issues are expressed is often dense and difficult to understand and, to make life still more complicated, many of the concepts and terms used by protagonists in the debate seem to mean different things to different people.*
>
> (Denscombe, 2010:117)

For example, Creswell (1998) divided the research process into epistemology, theoretical perspective, tradition and methods, whereas, Bryman (2008) divided the research process into theory, epistemology, ontology and research strategy and Denscombe (2010) used the terms philosophy and paradigms. Denzin & Lincoln (1998) describe the research process as follows:

Figure 1 - Denzin and Lincoln's research process
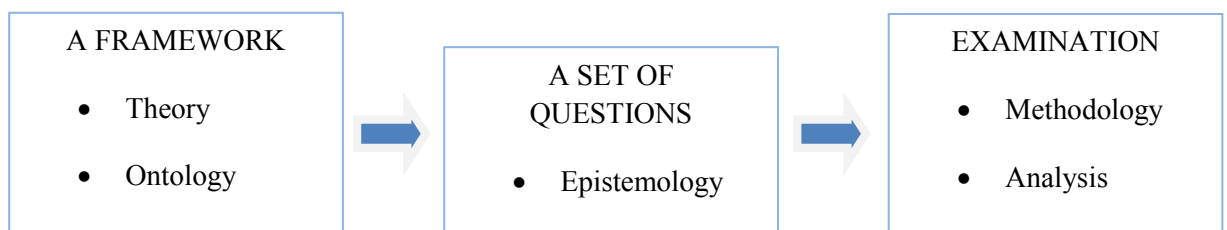
Denscombe (2010) states that it is crucial to consider how well the research tools work rather than how well they fit within a specific philosophy. However, I felt it was necessary to amalgamate categories to enable me to create a "best fit" model that could be implemented to provide a framework for this study. Table 1 outlines my research process. The process was decided upon by drawing on the different perspectives of experts in the field of social research methods (Creswell, 1998; Denzin & Lincoln, 1998; Bryman, 2008; Silverman, 2010; Denscombe, 2010 and Robson, 2011).

Table 1 - My Research Process

Theory/Philosophy	Inductive
Ontology	Constructivism
Epistemology	Interpretivism
Tradition	Phenomenology
Research strategy/Paradigm	Qualitative/Mixed methods
Methods	Literature synthesis Survey Focus groups Interviews

The process outlined in Table 1 will provide the structure for the theoretical discussions in this chapter. This discussion will provide a rationale for my choice of research design and strategies of inquiry. My research design portrays a flexible set of guiding principles that connects theoretical paradigms to strategies of inquiry and methods for collecting empirical information. This situates me in the empirical world and connects me to specific bodies of relevant interpretive material (Denzin & Lincoln, 1998). The specific methods that are used in my study will be outlined in Chapter 3.

2.2 Theory/Philosophy

Theory is important because it provides a backcloth and rationale for the research. It provides a framework within which social phenomena can be understood. To investigate the phenomenon 'social communication', an inductive approach, as opposed to a deductive approach, can be implemented. Induction relies on the gathering of evidence through

observations of the world to generate theories and hypotheses (Glogowska, 2011), whereas a deductive approach is hypothesis driven and the researcher sets out to answer questions.

Rather than starting with a specific research question or hypothesis that precedes the data collection, this research went backwards and forwards between the raw data and the process of conceptualisation, thus making sense of the data throughout the period of data collection. Although this process has gathered evidence through observations of the world and generated models, theories and hypotheses, the questions that evolved from my clinical work as outlined in Chapter 1 on page 12 are pertinent in grounding this process. These were broader than conventional research questions, but will be referred to throughout data collection and will provide a point of reference with regard to the discussion in Chapter 9. With an inductive stance, theory is the outcome of the research. The process of induction involves drawing generalisable inferences out of the data (Bryman, 2008). Although, at the outset of this study, I had some initial concepts and preconceptions relating to social communication in the clinical and educational context, these were only developed, evolved and refined during the data collection process. It was from the data that generalisable inferences were made. This reinforces Bryman's view that *"Just as deduction entails an element of induction; the induction process is likely to entail a modicum of deduction"* (Bryman, 2008:11).

2.3   Ontology and Epistemology

Ontology refers to the nature of social phenomena and the beliefs that researchers hold about the nature of social reality. Epistemology refers to the way that humans create their knowledge about the social world (Denscombe, 2010).

Ontology is described by Denscombe (2010) as having two basic positions: realism and contructionism. Bryman (2008) describes objectivism versus constructionism. It is evident that this study follows a constructionist stance.

> *Realists regard the social world as something that exists 'out there'. The social world, like the natural world, is seen as having properties that can be measured, and as having structures and relationships that are fairly consistent and stable.*

Constructionists regard the social world as a creation of the social mind – a reality that is constructed through people's perceptions and reinforced by their interactions with other people.

(Denscombe, 2010:119)

In my study, the reality of the phenomenon 'social communication' is being constructed by SALT's perceptions and reinforced by their interaction with each other. The phenomenon 'social communication', its meaning and perceptions about it are not only produced through participants' interactions but are in a constant state of revision (Bryman, 2008).

Figure 2, adapted from Denscombe (2010:118) clearly outlines how ontology and epistemology complement each other. Epistemology is not concerned with what social reality actually is, but with the logic behind our ability to acquire knowledge of what that knowledge is (Denscombe, 2010). There are two fundamental opposing epistemological positions, positivism and interpretivism; these positions link quite closely with the realist and constructionist positions in relation to ontology.

Figure 2 – The relationship between Ontology and Epistemology
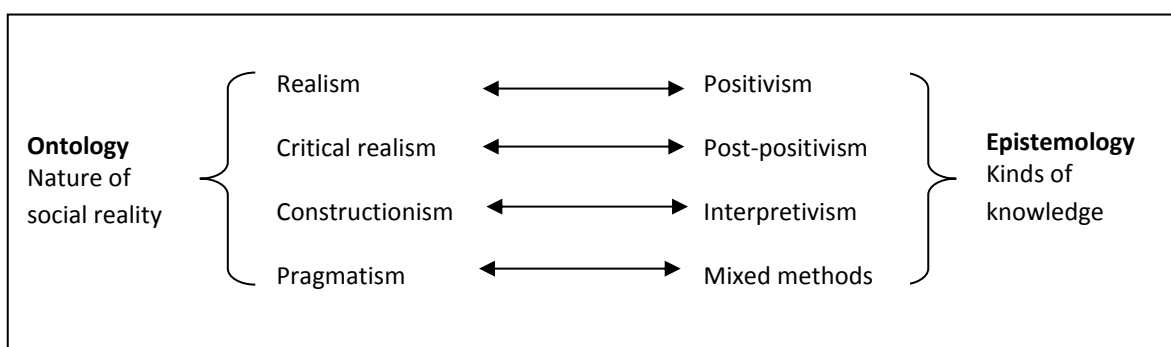
Positivism centres on the idea of using scientific methods to gain knowledge whereas interpretivism regards our knowledge of the social world as something that relies on human capacities to literally make sense of a reality. The social world has no inherent properties, no order and no structure. *"The knowledge that we have about reality is something that is produced, rather than being discovered"* (Denscombe, 2010:119).

In terms of epistemology, quantitative research emphasises the independence of the phenomenon and the possibility that the researcher maintains an objective stance to the

investigation. However, in qualitative research there is a more interactive relationship between researcher and researched (Glogowska, 2011). As a clinician working with children described as having social communication deficits, coupled with the data being collected from professionals working in the clinical and educational settings, there is naturally an interactive relationship between me as researcher and the researched. This will be discussed in more detail in Chapter 3.

Positivism is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond. Positivism in general terms accepts that the world is constructed in a way that allows you to measure phenomena, whereas interpretivism questions the predictability of the very world in which we live. It means that we cannot make any assumptions and therefore we cannot measure a phenomenon that may, in itself, be questioned.

Bryman (2008) quotes Schutz (1962) in order to explain interpretivism. When I read Schutz' quote it clarified for me the difference between positivism and interpretivism and how my study would take an interpretivist stance in order to explore the phenomenon 'social communication'.

> *The world of nature as explored by the natural scientists does not 'mean' anything to molecules, atoms and electrons. But the observational field of the social scientist - social reality - has a specific meaning and relevance structure for beings living, acting, and thinking within it. By a series of common-sense constructs they have pre-selected and pre-interpreted this world which they experience as the reality of their everyday lives. It is these thought objects of theirs which determine their behaviour by motivating it. The thought objects constructed by the social scientist, in order to grasp this social reality, have to be founded upon the thought objects constructed by common-sense thinking of men [and women!], living their daily life within the social world.*
>
> (Schutz as cited in Bryman, 1962:59)

To apply Schutz' explanation to my study it is important to note that the role of the social scientist is to interpret people's actions and their social world from their point of view. In this research study I interpret the actions of professionals working with individuals described as having social communication deficits in the clinical and educational setting. I interpret their working practice from their point of view and draw conclusions regarding the phenomenon that is 'social communication'.

Many of the characteristics of this study reflect the characteristics of qualitative research as outlined by Creswell (1998:16). He summarises the shared perspectives of leading authors (Bogan & Biklen, 1992; Eisner, 1991; Merriam, 1988). For example, in this study the researcher is a key instrument of the data collection, the data is collected predominantly in words, the outcome is a process rather than a product, the analysis of the data is inductive and the focus is on participants' perspectives. The importance of these concepts is reiterated in Creswell (2007).

Creswell (1998) comments on philosophical assumptions that guide qualitative research. The following assumptions can be applied to this present study in terms of the participants' knowledge of social communication:

- Knowledge is within the meanings people make of it.
- Knowledge is gained through people talking about their meaning.
- Knowledge is laced with personal biases and values.
- Knowledge is written in a personal, up close way.
- Knowledge evolves and emerges.

2.4 Tradition

As outlined in Chapter 1, this study has developed from my working practice as a Speech and Language Therapist in the educational setting with a population of pupils described as having social communication difficulties. My work left me questioning the whole phenomenon 'social communication'. In order to research this phenomenon it was essential to consider the literature regarding qualitative and quantitative research methods. The literature outlines the different perspectives, philosophical and theoretical frameworks and research traditions. Creswell (1998), for example, outlines the following five traditions within qualitative research:

- A biography
- A case study
- An ethnography
- A phenomenology
- A grounded theory

Creswell selected these traditions based on personal interest, differing foci and to represent different discipline orientations; other experts outline additional taxonomies. From considering Creswell's five traditions I believe that the focus of the present study is on the understanding of the concept or phenomenon 'social communication' and as such is influenced by the tradition of phenomenology. Robson (2011) defines phenomenology to be something that,

> *Focuses on the need to understand how humans view themselves and the world around them. The researcher is considered inseparable from assumptions and preconceptions about the phenomenon of study. Instead of bracketing and setting aside such biases, an attempt is made to explain them and to integrate them into the research findings. The research methodology informed by what is often called interpretive phenomenology seeks to reveal and convey deep insight and insight and understanding of the concealed meanings of everyday life experiences.*

<div align="right">(Robson, 2011:151)</div>

Applying Robson's definition to this study means that the focus is on professionals' experiences of social communication and on how they view themselves in relation to dealing with social communication in the clinical or educational setting. As I am a Speech and Language Therapist working within the field of social communication and also the researcher in this study I am inseparable from the assumptions and preconceptions about the phenomenon of study.

Creswell specifies that one of the common issues in the tradition of phenomenology concerns bracketing one's experiences. He describes bracketing as being when "*The researcher also sets aside all prejudgements, bracketing his or her experiences and relying on intuition, imagination, and universal structures to obtain a picture of the experience*" (Creswell, 1998:52).

The opinions of Creswell (1998) and Robson (2011) appear to contradict each other. One is suggesting bracketing off knowledge, experience and beliefs; the other is stating that the knowledge, experience and beliefs should be integrated into the findings. The concept of phenomenology originates from Husserl in his paper in 1931 (cited in McConnell-Henry, Chapman & Francis, 2009). He believed that to enable valid data to be generated it was necessary for the researcher to put aside any presuppositions that they may have. He

termed this bracketing. McConnell-Henry et al. (2009) provide another perspective when they describe *"Unpacking Heideggerian Phenomenology"*. Heidegger's philosophy, hermeneutic phenomenology, is that we construct reality from our own beliefs and experiences. Phenomenology is reliant on making use of people's lived experiences so that the researcher can better comprehend the meaning or significance of the happening. Heidegger was challenging Husserl's beliefs. Heidegger believes that it is not possible to interpret data devoid of judgements. It is appropriate to consider hermeneutic phenomenology as a means for exploring the experiences of SALTs working with individuals described as having social communication deficits. As SALTs we are absorbed in the world of SALT and as people we are immersed in the world of communication. As such we are unable to separate ourselves from these. We are not objects amongst things but we are at all times absorbed within a community. McConnell-Henry et al. (2009), state that the beauty of using Heidegger's philosophy to underpin a study is that it allows preconceived ideas to be merged with experiences to develop an understanding of the phenomenon.

These different perspectives placed me in a dilemma with regard to what to do with my own knowledge, opinions and perceptions. As a clinician working within the field my own practice was bound to influence the way that I designed my study, for example, creating the questionnaire and structuring the focus group and interviews. Issues relating to objectivity or confirmability will be discussed in more detail in Chapter 3, section 3.5. However, it is important to state here that I believe it is not possible to ensure that my knowledge does not impact on data collection and that, if a lay person conducted the study, the inquiry may have been different. I feel that it is important to acknowledge that my own opinions, knowledge and perceptions exist but that they do not dominate the analysis of the data. However they are likely to have an influence and as such are a valuable and legitimate component of the research. In reporting my study and to provide clarity for the reader, I have chosen to outline the development of the model of intervention that I used within the educational setting. This ensures transparency in demonstrating my clinical knowledge and enables the reader to identify with my experience and preconceptions. This is not to be viewed as "bracketing" as I intend to interject my personal experiences during the analysis of the data, and I have attempted to explain any bias and to integrate it into the research findings. This is reported in detail in Chapter 3, Methods.

2.5 Research Strategy/Paradigm

A research paradigm refers to a pattern for research (Denscombe, 2010). Bryman (2008) discusses the distinction between qualitative and quantitative research. Taking the two paradigms at face value it would seem that the significant factors that distinguish one from the other is the fact that quantitative research uses measurements and qualitative research does not. However when taking into consideration the connection between theory and research the philosophical, epistemological and ontological considerations make distinct groups of research strategy or orientation. As quantitative research involves a belief in the need for numerical data it is generally linked with a realist ontology and a positivistic epistemology. Conversely, as qualitative research is concerned with the way people shape the world it favours a constructionist ontology and interpretivist epistemology. When conducting research in applied settings such as education, health or social work it is more likely that the research design is based on methods generating qualitative data (Robson, 2011).

Although qualitative and quantitative research represent different research strategies and theoretical perspectives the division is not clear or rigid. More recently and more commonly the two are being combined within research projects. *"In principle (and not uncommonly in practice) so-called qualitative designs can incorporate quantitative methods of data collection."* (Robson, 2011:131). This is increasingly referred to as mixed methods and is commonly regarded as the third paradigm. The decision to use mixed methods should not be based on how it fits with a theoretical perspective but it should be based on how useful the methods are at addressing the issues (Denscombe, 2010).

All qualitative approaches demonstrate substantial flexibility in their design, typically anticipating that the research design emerges and develops during data collection. Ideas for changing an approach may well arise from involvement in early data collection (Robson, 2011). Although many qualitative researchers use statistical measures, methods, and documents they seldom report their findings in terms of the kinds of complex statistical measures or methods to which quantitative researchers are drawn. Quantitative researchers are seldom able to capture the subject's perspectives. This is because they have to rely on more remote, inferential empirical methods (Denzin & Lincoln, 1998).

Qualitative research is multi-method in focus. My study involves an interpretive, naturalistic approach to make sense of the phenomenon 'social communication'. This means that as the researcher I have conducted the study about the natural settings of education and health services, attempting to interpret the meanings SALTs, Educational Psychologists (EPs) and teachers bring to explore the phenomenon 'social communication'. As the researcher I have deployed a wide range of interconnected methods, hoping to get a better understanding on the subject of social communication in the clinical context with communication impaired individuals (Denzin & Lincoln, 1998).

A research strategy involves inquiry. A strategy of inquiry is a collection of skills, assumptions and practices that researchers must use as they transfer from their paradigm to the empirical world. It connects the researcher to specific methods of collecting and analysing empirical materials (Denzin & Lincoln, 1998). In my study, my paradigm was mixed methods and these methods were selected on the basis of how well they worked as research tools, rather than how well they fit within a specific philosophy. How I achieved this will be discussed in the next chapter.

2.6   Summary of Methodological Considerations

This chapter has provided an overview of the various discussion points concerning the theoretical concepts that must be given consideration when embarking on a research journey. I have linked these theoretical components to my own study to explore the phenomenon 'social communication'. My research design is underpinned by a broadly phenomenological approach. It uses an inductive philosophy and is fundamentally from an interpretivist position following a constructivist stance. My research was designed to have a quantitative element as well as using predominantly qualitative methods and therefore could be considered a mixed method approach. There are tensions in adopting this mixed methods approach, but the quantitative element was necessary in order to gain numerical data regarding the caseloads of three professional groups and their current practice, including comparisons across data, whilst the qualitative data allowed in-depth exploration of the specific experiences and perceptions of SALTs. It is important now to focus on the specific methods used to carry out the research inquiry and this will be reported in the next chapter.

3   Chapter Three - Methods

3.1   Introduction

The previous chapter has generated discussion regarding the theoretical perspectives and methodological considerations necessary to set the scene for this piece of research. Theoretical considerations informed my research design and enabled me to understand and select appropriate research methods to explore the phenomenon 'social communication'. This chapter aims to take the reader through the journey of the methods chosen for my research. Given the nature of the research and its context, I will first outline my own knowledge and experience in the subject area, then go on to explain my choice of methods, identify ethical considerations, discuss issues of quality control, summarise the sampling procedure and describe the data collection process.

3.2   My own knowledge and experience in the area

It is important to ensure that my own knowledge, opinions and perceptions do not dominate the study. I have, therefore, chosen to outline the development of the model of intervention that I used within the educational setting, in order to highlight my own knowledge, opinions and perceptions. This will ensure that I am being open and honest with regard to my previous experience; I can then discuss the implications of this upon the research study. It is my intention to explain any bias and to integrate it into the research findings.

As a practitioner working within the field of social communication I have applied a variety of models and strategies to address the needs of individuals with social communication deficits. Over a number of years, a teacher and I developed what we called "A Social Communication Based Curriculum". This was implemented throughout the school, incorporating all curriculum subjects and unstructured times. This curriculum had a method of intervention and assessment. It included sessions to teach/learn isolated skills, opportunities to practise these skills in a safe, secure and predictable setting, strategies to support their generalisation within the school environment and programmes to further expand them into the wider community.

A scheme of work incorporating individual elements of social communication was written by the SALT to be delivered in class group sessions once a week. These weekly social communication objectives were then reflected in the schemes of work written by all subject teachers within the school. The teachers had their own subject objective to address but they also had a communication focus to embed into their lesson. For example, the maths teacher would address their curriculum learning objective "To understand odd and even numbers", as well as the communication focus "To understand ambiguous language, when used as an idiom".

Planning by the SALT and the teachers would include long term (yearly overview), medium term (termly scheme of work) and short term (lesson/session) plans. Samples of these are provided in appendix 1.

Each SALT session and curriculum lesson was planned and evaluated to identify the following (see lesson plan in appendix 1):
- What visual strategies were necessary to support learning?
- Whether the objective was met by the young person (teacher/therapist evaluated and self-evaluated).
- What opportunities were available during the lesson to allow for appropriate communication?

This structure increased the teachers' awareness of social communication from planning through to teaching and during evaluation. It also enabled the collated data to be analysed to create an individual profile of each young person's ability to meet the objective in the taught session, to generalise into a different environment and to identify their level of insight into their social communication competence. For example,

Figure 3 – Increased teacher awareness of social communication

| Does the pupil understand what is meant by 'taking turns' during conversation when taught in the social communication session? | Does the pupil take turns appropriately during a maths lesson when provided with the opportunity to do so? | Does the pupil evaluate themselves as being able to take turns appropriately? |
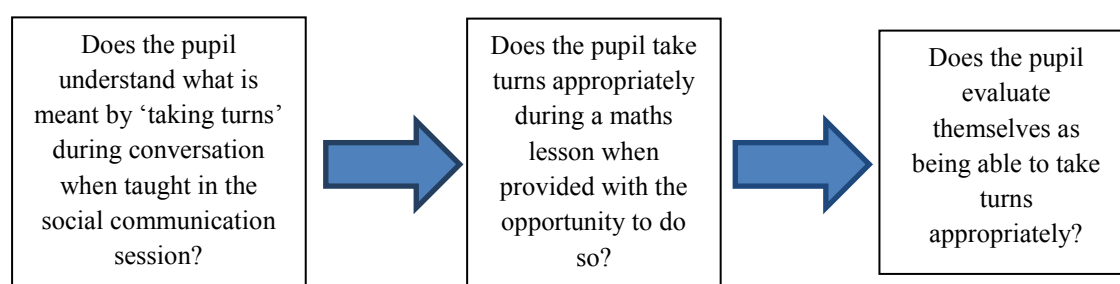
If a pupil failed to meet an objective this would be addressed as an individual target. Residential pupils would have additional communication foci within the care setting; these would be addressed in similar ways by activity planning, implemented by Residential Social Workers. Further one-to-one sessions with a SALT would support the generalisation of these skills once the pupils had reached Key Stage 4 (ages 14 to 16 years). We called this Generalisation Therapy. Figure 4 demonstrates how the "Social Communication Based Curriculum" allows for planning, teaching, learning, practice and generalisation of skills:

Figure 4 – The key principles of the social communication curriculum
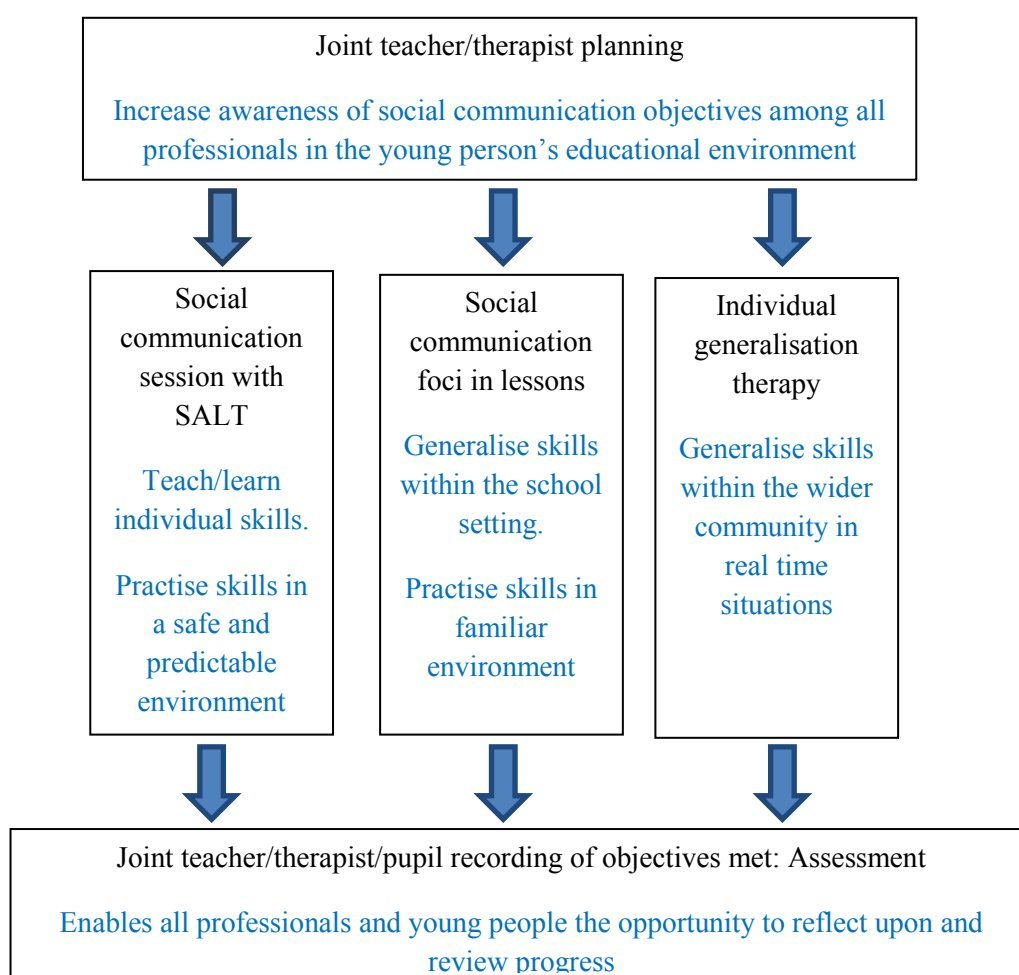
This "Social Communication Curriculum" was reviewed and amended on a regular basis. I no longer work within the setting where this intervention was initiated, but I am aware that the same system continues to be used, reviewed and evaluated. It is essential to point out that the curriculum was devised as a bespoke package to meet the needs specific to the pupil population within the school. Every pupil within the school accessed the curriculum

and they received the social communication sessions in their class groups. The class groups were already organised according to their language ability, as assessed using the following formal assessment tools: Clinical Evaluation of Language Fundamentals (CELF 4, Secord, Semel & Wiig, 2006), the Test for the Reception of Grammar (TROG, Bishop, 2003) and the British Picture Vocabulary Scale (BPVS, Dunn, Dunn & Whetton, 1997). It was assumed that all pupils attending the school had deficits in the area of social communication based on the fact that the admission criteria for the school included social communication as a variable. Pupils received this intervention regardless of the underlying cause of those deficits. The Social Communication Curriculum was divided into three levels; basic skills, intermediate skills and advanced skills (see appendix 2). These skills were collated by me and the individual elements derived from my own interpretation of what was meant by the term 'social communication'. At no point did I have a clear operational definition of what I meant by the term. By summarising my own intervention model in this chapter it has enabled me to set aside my thoughts to allow me to consider the best methods to implement in this study.

3.3   My choice of methods

I wanted to explore the phenomenon 'social communication' in the clinical and educational setting. To do so I felt it was important to establish what professionals mean by the term. Only by having more information regarding its meaning would I be able to explore people's experiences of working in an educational and clinical setting with this population of children and young people who are described as having social communication deficits. I wanted to synthesise information from the literature which would contribute to understanding the term in its widest sense and to place it in the educational and clinical context. I needed to combine the information from the literature with additional data from real experiences, perceptions and opinions of professionals working within the field. I needed to establish if professionals were familiar with the term, if their caseload included children and young people with social communication deficits and how they felt issues associated with this field of work were being addressed. I had to choose my methods carefully to ensure that I was gathering data that would generate theories and hypotheses rather than answer specific questions. The design of the study was based on four methods of data collection in five different data sets. The following diagram outlines the data collection process:

Figure 5 – The timing and process of data collection

Literature Synthesis		Pilot study focus group
		"What is social communication?"

Literature relating to social communication was themed, coded and synthesised.

→ **Survey/questionnaires to Teachers, SALTs, EPs**

Numerical data regarding their caseload

Numerical data regarding type of support

Qualitative data regarding support

Qualitative data regarding progress

Qualitative data to define "social communication"

→ **3 more focus groups**

Exploring social communication

→ **3 interviews**

Specific interventions with pupils with social communication deficits

The Timing and Process of Data Collection

I will go on to explain each data collection phase in turn. Before doing so I will outline my mixed methods approach and how I addressed design challenges in terms of underpinning and strengthening my work in a way that would add rigour to my findings.

A mixed-method approach, involving both quantitative and qualitative methods, was considered to improve the validity of the study. Mixed methods alone do not increase the validity of a study, but how these methods are used does. The use of terms such as validity and reliability in relation to qualitative research is contentious. This will be discussed further in section 3.5 of this chapter.

Researchers must integrate methods rather than using parallel methods (Pope & Mays, 2009). Comparing results from the different methods enhances the likelihood that one method cancels out the weaknesses of the other (Glogowska, 2011). Mixed methods provide triangulation and this research used four methods of data collection: synthesis of the literature, a survey, focus groups, and semi-structured interviews. One method complemented another method, providing greater elaboration and understanding of the phenomenon 'social communication' (Morgan, 1997), for example, a survey provided numerical data to describe types of support and actions taken by various professional groups (teachers, EPs and SALTs). This was supported by open ended questions in the survey to explore rationales. These open ended style questions were also used in the focus groups and then became more specific in the semi-structured interviews. The specific methods of data collection will be discussed later in this chapter. The aim of using mixed methods was to build a comprehensive picture to enable social communication to be described broadly and thoroughly. Exploring the phenomenon of 'social communication' in the clinical contexts of education and health services provided a natural setting and dealt with a human focus. This study is exploring clinicians' lived experiences of working with individuals with social communication difficulties and analysing their professional perspectives and opinions, as well as their ability to apply their theoretical knowledge to their practice. Clinicians' practical working knowledge is influenced by judgments and, as such, different methods were required at different stages to address separate ideas. For example, using information from the initial pilot study (a single focus group) informed the content of the survey which explored some of the same concepts as the focus groups. The semi-structured interviews expanded on the themes already generated and enriched the

concepts developed by both the survey and focus groups. Parallel to all other methods is the thematic analysis and synthesis of the literature.

Undertaking a research project that investigates social communication in an educational or clinical setting raised logistical challenges. Potential participants were likely to have clinical commitments that would necessarily take priority over any contribution to a research study. The research design needed to be focused and organised to collect data that reflected the current environment for clinical practice within the field of social communication. A mixed methods approach allowed for this focus and organisation of the data. Using triangulation enabled data from different research methods to converge. It can confirm a finding generated from one source of data but it can also add further meaning or explain a phenomenon in more detail (Stake, 1995). However, it can also raise both logistical and practical difficulties, for example that findings collected by different methods differ to a degree which makes their direct comparison problematic (Robson, 2011). It is considered that organised research can be less qualitative versus quantitative and more how research practices lie somewhere on a continuum between the two (Newman & Benz, 1998).

A key principle from the outset of this particular study was that the perspectives would be valued equally and that a triangulation of methods would mutually reinforce the study findings. Therefore, the study design was developed using different research methods to gather the views of professionals working within the field. Ritchie (2003) has claimed that the kind of triangulation employed in this study extends the integrity of inferences drawn from the data. This study adopted quantitative and qualitative methods for reasons that go beyond the purpose of cross checking results. The qualitative approach was required to check the findings from the quantitative element of the study and also to raise themes that had not been considered by the researcher. In addition, the qualitative approach would allow the researcher to take a holistic attitude to collecting and interpreting the views of those involved in working with children/young people with social communication deficits in an environment that involves the complexities of human behaviour (Black, 1994).

Triangulation allowed the study to gather two different types of data: quantitative data would investigate specific issues relating to current provision for those with social communication deficits via a survey, and qualitative data would involve the adoption of a

more narrative approach that would focus on participants' perspectives of the phenomenon and generate concepts and themes (Bryman, 2001).

> *Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting.*
>
> (Creswell, 1998:15)

My study is an inquiry process of understanding social communication based on the distinct methodological tradition of phenomenology that explores the social or human problem of making sense of social communication in the clinical and educational settings. I, as the researcher, am building a complex, holistic picture, analysing words, reporting detailed views of informants, and conducting the study using participants with experiences from the natural setting of clinic and school services.

3.4 Research Governance and Ethical Principles

The Belmont Report (1979), a seminal guide, that underpins most current professional codes of ethics, promoted six principles for research; autonomy (informed consent), beneficence (the best interests of the individual), justice (partnership), fidelity (confidentiality), non-maleficence (do no harm) and veracity (trust).

The ways in which this study addresses these key ethical principles will be discussed at the point of data collection, later in this chapter. However, the first ethical consideration was to approach the SALT Manager at the Primary Care Trust (PCT) and the Principal of the School (the key gatekeepers in terms of this study) to ask if they would be willing for me to undertake the project. Permission was granted. The initial phase of this research was to complete a pilot study *"A small scale version of the real thing; a tryout of what you propose so that the feasibility can be checked"* (Robson, 2011:141). The pilot study comprised of a single focus group and the sample population was taken from SALTs working for a Primary Care Trust in the North West of England. As these were National Health Service (NHS) staff it was essential that ethical approval was sought from the Health Trust. Approval was granted from the PCT Research Ethics Committee in June 2003 (see appendix 3). The next phase of data collection involved a survey, focus groups

and interviews using a sample population of SALTs, EPs and teachers. The sample was gathered across NHS Trusts and therefore, in 2003, required Multi-Research Ethics Committee (MREC) approval. This process was initiated in 2003 by applying to South West Multi-Centre Research Ethics Committee as directed by the Central Office for Research Ethics Committee (COREC). Approval was granted in February 2004 (see appendix 4). However, following changes to the research study a Notice of Substantial Amendment was submitted to COREC in May 2005. Final ethical approval was granted in May 2005 (see appendix 5). This process ensured that the proposed study was peer reviewed. It enabled the research proposal to be scrutinised which guaranteed that external agencies approved the research design and chosen methods. The acceptance that the ethical implications had been considered and dealt with appropriately added to the validity of this study.

It was considered to be of paramount importance that this study would go through appropriate significant ethical scrutiny. Health professionals were being asked to give their time and express their opinions regarding professional judgements, perspectives and assumptions. I have taken an open, honest and transparent approach while undertaking this study in order to protect individuals who have taken part in the study while working in a real-life social world (Golby, 1994).

When carrying out research involving people, there is the potential for harm, stress, anxiety, and other negative consequences for any research participants (Robson, 2011). As a researcher, I needed to be sensitive to the likely impact my work would have on those involved. It is my duty to work in a way to minimise the adverse effect on those involved *"Participants should not be adversely affected as a consequence of engaging in the research"* (Denscombe, 2010:63).

In this study, participants in the focus groups were expected to express their professional opinions in front of other clinicians. This had the potential to expose them to judgements from others, possible conflict and subsequent stress and anxiety. It was important to maintain confidentiality and to ensure that participants were fully informed of the implications of being involved.

It was necessary to gain informed consent; to explain to participants what the study involved and to let them know that they could have time to think about participation. It was essential to provide a consent form and to check that participants understood their role in the study, emphasising that they had the right to withdraw at any time (see appendix 6). Informed consent has been embedded into various codes of ethics adopted by professional associations (Denscombe, 2010). These codes vary slightly but Denscombe (2010) cites Homan (1991) who summarises that the essence of informed consent is that:

- All pertinent aspects of what is to occur and what might occur are disclosed to the participant
- The participant should be able to comprehend this information
- The participant is competent to make a rational and mature judgement
- The agreement to participate should be voluntary, and free from coercion and undue influence.

Informed consent is regarded as good practice by ethical research boards and committees and expected in legal frameworks such as the UK's Data Protection Act 1998. This ensures that reasonable steps have been taken to keep the information secure and to guarantee that the information is used only for the purposes for which it is collected (Denscombe, 2010). Reporting the research should not allow individuals or organisations to be identified by name or by role. Also, people have a right to privacy; contacting people at work in connection with research needs to be made in a way that respects this.

3.5   Issues of research rigour

"Validity and reliability are the concepts that are regarded as the cornerstones for evaluating social research designs", (Denscombe, 2010:106). When designing this study and adopting different research methods, a fundamental concern was that of validity and reliability. Often different terminology is used by social researchers to outline the different aspects that ensure the quality of a qualitative piece of research. There is a debate regarding the most effective way of ensuring that a study is transparent, true, accurate and correct. Bryman (2008:31) states that, *"Three of the most prominent criteria for the evaluation of social research are reliability, replication, and validity"*. However, many experts in the field break down the criteria for study evaluation into internal validity, external validity, reliability and objectivity. In 1985, Lincoln and Guba proposed

trustworthiness as a criterion of how good a study is. Each aspect of trustworthiness is paralleled to the quality criteria of quantitative research as follows:

- *Credibility* - are the findings believable? (parallels internal validity)
- *Transferability* – do the findings apply to other contexts? (parallels external validity)
- *Dependability* – are the findings likely to apply at other times? (parallels reliability)
- *Confirmability* – has the investigator allowed his or her values to intrude on the findings? (parallels objectivity)

Trochim (2006) describes the considerable debate among methodologists regarding the value and legitimacy of this alternative set of standards for judging qualitative research. Many quantitative researchers see the alternative criteria as simply a choice of terminology and a relabeling of the quantitative criteria. Some quantitative researchers suggest that a correct application of the quantitative criteria demonstrates that they are not limited to quantitative research alone and can be applied equally well to qualitative data.

The concepts of validity and reliability originate from the use of quantitative research within a positivist philosophy, but have been adapted for use within qualitative research within an interpretivist philosophy as well.

(Denscombe, 2010:106)

However, the alternative criteria represent a different philosophical perspective that is subjectivist rather than realist in nature. Research naturally assumes that there is some reality that is being observed. Although the alternative criteria are widely accepted, it could be believed that no researcher has adequately explained how the operational procedures used to assess validity and reliability in quantitative research can be transferred into legitimate corresponding operations for qualitative research (Trochim, 2006).

In order to evaluate the quality of my study, I have chosen to use the following four criteria; credibility, transferability, dependability and confirmability. Each of these will be discussed in detail and will outline how I have taken each into consideration to ensure the quality of this study. However, to set the scene, Denscombe (2010) provides an excellent overview of validity and reliability. He describes **Validity** to refer to the quality of the

data. The data needs to be precise, accurate and detailed enough for the purposes of the research. Importantly, the data also needs to be based on the right information. Researchers need to ask the right questions and receive answers to appropriate questions. They need to be sure that the indicators they use accurately reflect the concept they are investigating. He describes **Reliability** to refer to the quality of the methods. Any researcher or reader must feel sure that the methods used are consistent. They need to know that any difference in results represents a real difference in the property that is being measured and not being produced by an unreliable instrument.

As validity is to do with something being accurate, correct and true, it is a difficult thing to be sure about. Threats to validity are description, interpretation and theory. Triangulation is argued by several authors to be an alternative to validity and not a strategy in itself to add validity to a study design *"Triangulation can help to counter all the threats of validity"* Robson (2011:158). It may be implied that triangulation, as an alternative to validity, did not need to have built in strategies to add validity as the combined method approach acted as a check to the data collected. However, even though triangulation is relevant to validity, it can complicate matters if different methods reveal different findings, thus making a direct comparison impossible. This study built in mechanisms to increase further validity.

Validity in qualitative research methods is more problematic than in quantitative work. Denzin and Lincoln (2000) argue that validity in qualitative research involves description and explanation. Are the explanations that the researcher provides feasible and credible? The study design, using triangulation, incorporates checks and balances that would arguably add validity and exclude as many variable factors as possible. The quantitative research tools in this study had to be reliable. If they were not, it would mean the measures could never be valid (Bryman, 2008). The validity of postal questionnaires, an approach used in this study, raises two key questions. Firstly, did the respondents who completed the returned questionnaires do so accurately and in good faith; secondly, would non-respondents have given the same range of answers as those who did respond? (Cohen, Manion & Morrison, 2000). In defence of these two criticisms, respondents to the questionnaires were anonymous and confidentiality was assured, the qualitative elements of the study checked, investigated and backed up parts of the quantitative findings.

Additionally the questionnaires were piloted which adds further reliability, validity and practicability to the study.

3.5.1 Credibility

Traditionally in quantitative research internal validity addresses the issue as to whether the research findings are believable. The parallel to this in qualitative research is credibility. Credibility involves establishing that the results of qualitative research are credible or believable from the participant's view point. As this piece of research intends to describe and understand the phenomenon 'social communication' from the participant's perspective, the participants are the only ones who can legitimately judge the credibility of the results (Trochim, 2006). To increase credibility I needed to share the results with the study participants in order to provide them with the opportunity to raise any concerns they may have. This was done by posting a summary of the findings to the 29 focus group participants, inviting them to comment. Only one participant replied stating that they were grateful for the findings and thanking me for the information. It seems reasonable to infer that those who did not respond assented to my conclusions.

3.5.2 Transferability

Traditionally in quantitative research external validity deals with the issue of whether the findings apply to other contexts. The parallel to this in qualitative research is transferability. Transferability refers to the extent to which qualitative research results can be generalised or transferred to other contexts or settings. The qualitative researcher can enhance transferability by describing the research context and the assumptions that are central to the research. The person who wishes to 'transfer' the results to a different context is then responsible for making the judgment of how possible the transfer is (Trochim 2006). I have addressed transferability in this study by describing the research context and clearly explaining the research process, the methods I have used and the analytical procedures I have applied. This level of transparency will support transferability within the limits of a time and context bound study.

3.5.3 Dependability

Traditionally in quantitative research reliability tackles the question of whether the findings are likely to apply at other times. Parallel to this in qualitative research is

dependability. The idea of dependability emphasises the need for the researcher to account for the changing context within which research occurs. The research must describe the changes that occur in the setting and how these changes affect the way the researcher designed the study.

It demonstrates that the study and the data collection processes could be repeated with the same results. As reliability is concerned with replicability of research findings it has been questioned by a number of authors whether this is possible in qualitative research. For example, Robson, (2011) argues that qualitative research should strive for consistency rather than reliability. However, it can be argued that reliability should be built in to qualitative studies (Silverman, 2010). This may be achieved, to some degree, in developing a robust research design and by ensuring that the whole research process, including the interpretation of results, is clear to the reader (Ritchie & Lewis, 2003). This study was undertaken with the utmost care that the research process was both systematic and transparent.

> *Researchers using flexible designs do need to seriously concern themselves with the reliability of their methods and research practices. This involves them not only being thorough, careful and honest in carrying out the research, but also being able to show others that you have been.*
>
> (Robson, 2011:159)

In order to add dependability to this study the thematic framework was passed on to an independent researcher who analysed parts of the transcripts of the focus group conversations. The aim of this process is to check whether another observer using the same thematic framework and the same transcripts interpreted the data in the same way (Cohen et al., 2000). Analysis from the independent researcher demonstrated similar findings.

3.5.4 Confirmability

Traditionally in quantitative research objectivity focuses on whether the investigator has allowed his or her values to intrude on the findings. The parallel to this in qualitative research is confirmability. Confirmability refers to the degree to which research results can be corroborated or confirmed by others. This is of particular importance in my study

as I am both the researcher and a clinician working with individuals described as having social communication deficits. The research topic was chosen by me as it was of interest to me as a clinician. As I explained in chapter one this research study developed from the need to explore the evidence base of intervention models in the area of social communication and the desire to examine the effectiveness of my own therapy. In an attempt to consider effectiveness, I exposed uncertainties, reservations and questions regarding the appropriateness of interventions. It is difficult therefore, for me to confidently state that I was truly objective. I need to be open-minded and self-reflective in order to demonstrate that my research is impartial and unbiased. It is important for me to demonstrate that my findings are not biased by my prior attitudes and conceptions (Denscombe, 2010).

I am confident that, despite my previous experience of working with individuals with social communication deficits, my research has been designed, conducted and reported in the genuine spirit of exploration. To prove this I will ensure that *"Any vested interests, social values or aspects of the researcher's self-identity that might have a bearing on the impartiality of the research have been explicitly acknowledged"* Denscombe (2010:81). As this research is based on phenomenological foundations I have outlined my own interventions as a clinician earlier in this chapter to ensure that I am being open and honest with regard to my previous experience. Obviously, the intervention that I devised as a SALT to address the needs of those with social communication deficits, is what I perceive to be best practice and although this has a bearing on how I view the phenomenon being studied, it has not impacted on how I, as a researcher, collected the data. The questions that I asked during the focus groups were impartial and not influenced by my own practice. I did not guide the discussion to meet my own agenda. In fact for the pilot study focus group I ensured that a non-clinician was the facilitator in order to ensure that my prior knowledge did not influence the findings. From comparing the analysed data that emerged from the focus group when using an independent facilitator with the data that emerged from focus groups that had me as the facilitator the findings are equally non-biased.

Confirmability is the basis of what it means to engage in research and it is a crucial criterion for judging the credibility of findings. Denscombe (2010) believes that it is generally considered that social researchers can never be entirely objective. Researchers see things in a way that has been shaped by their culture, socialisation and the concepts

they use to make sense of the world around them. They can never really stand outside things to see them from an objective vantage point.

There is a longstanding debate amongst researchers about the true existence of objectivity. Some argue that research findings will always reflect the person who produces them. Others argue that there are inherent limits to how far pure objectivity can be achieved but that objectivity is an ideal to which the researcher should aspire (Bryman, 2008). I believe that in conducting this research I have taken a reasonable level of detachment and open-mindedness. In doing so, I have ensured that I have given more power to my findings than if they were based on common sense or received wisdom, (Denscombe, 2010). To be detached means to try and take an external vantage point to gain a better view and to be open-minded means to be neutral, impartial, unbiased, fair, and have no vested interests. It is my belief that in collecting the data I have done all of these things. As a researcher it is important to me to find out as much as possible about what professionals in the field mean by the phenomenon 'social communication'. In practice a researcher's background and culture can threaten the researcher's ability to be detached and open-minded. Researchers may be swayed or have a vested interest in the outcome of their investigation. It is of no advantage to me as a clinician to prove or disprove my own intervention methods but any findings from my research will help me to modify my own intervention methods to support the population of pupils that I work with. I have no vested interest in the outcome of the research.

> *Objectivity calls for the researcher to engage with the opposition. It does not allow researchers to ignore views they hold in contempt or theories they regard as inadequate.*
>
> (Denscombe, 2010:86)

It was vital that I engaged with my participants especially during the focus groups and the interviews. I did not ignore any of their views nor did I hold in contempt any of the theories that were generated by the data. This provided me with the confidence that my research produced fair and balanced findings. My personal values, beliefs and my background will have inevitably influenced my study design but by maintaining detachment and open-mindedness I have endeavoured to be non-biased. However, as Robson (2011:158) states *"When there is a close relationship between the researcher and*

the setting and between the researcher and the respondents, bias and rigour is particularly problematic". Objectivity means neutrality, not taking sides. To be objective means to be independent from the subject being studied, to be detached and to avoid getting embroiled in the rights and wrongs of the situation. Although I have preconceived ideas regarding the subject under investigation I have maintained independence when conducting the study. My role as a social researcher is to provide information and produce knowledge that others can use to make decisions, not to affect the data collection process and make decisions based on findings.

Although I have defended my position in terms of objectivity I find the following quote from Denscombe (2010) to be a very valuable view.

> *Researchers cannot strip themselves of their values. Such values will have been inculcated through family life, education, religion, the media and the community and be so deeply embedded that they cannot simply be taken off like a jacket and hung in a corner until it is convenient to put them on again. Our values are our skins not our clothes. They cannot be changed at our convenience. It is inevitable that these values will shape researchers' choice of what is worth investigating and will have some bearing on how they perceive matters.*
>
> (Denscombe 2010:89)

My values have indeed shaped my choice of what is worth investigating and it will have some bearing on how I perceive and interpret the findings. However, I believe that this will enrich my interpretation of how the data will be applied within the clinical and educational setting. If a lay person was to have conducted the study then their ability to interpret the findings and apply them may have been limited or restricted.

There are several ways that this study enhances confirmability. I have reported on the procedures for checking the data analysis of this study. I used another researcher to take a "devil's advocate" role with respect to the results, and I have documented this process in my analysis.

3.6   Sampling

It is a general feature of social enquiry to select samples for study. Even if a study involves a small population decisions must be made about people, settings and origins. There are two distinctive types of sampling strategies, and they are known as **probability**

and **non-probability** samples. This research study uses a non-probability sample for selecting the population for this study. The sample is not intended to be statistically representative. The characteristics of the population are used as the basis for selection (Ritchie, Lewis & Elam, 2004). How participants are recruited is described in each method of data collection in the next section.

3.7 Data collection

As mentioned previously I used five sets of data collection (Figure 5). Each method will be discussed in turn, outlining in detail the process of collection and type of analysis.

3.7.1 Literature Synthesis

This study is addressing issues around the term 'social communication'. An extensive literature search was undertaken to gather and explore existing information systematically. As outlined in my introduction, the evaluation of the literature culminated in a synthesis of relevant data as opposed to a review or critique of the articles. This synthesis subsequently helped to develop a holistic picture regarding the origin, nature and development of social communication. In some respects my analysis of the literature concluded with a synthesis of related data via a method of thematic analysis rather than a review or critique of the articles. It can, therefore, be considered as part of my method of data collection; contributing to conceptualising the phenomenon 'social communication'. This was on-going throughout all stages of other data collection methods and influenced my framework for analysing the semi-structured interviews.

Analysis of the Literature Synthesis

As each article was read, the key factors were identified and the relevant text was highlighted. These text segments were then organised into themes, colour coded and labelled. A framework of themes evolved and the pertinent information identified was allocated to the themes as each new article was digested. These themes are used as headings to structure the written recording of the information gathered from the literature. This information was then synthesised. The themes were refined and reorganised as new information emerged. This form of analysis was broadly based on the principles of thematic analysis outlined by Braun and Clarke (2006). See appendix 7 for a sample of analysed data.

3.7.2   Pilot Study

The first phase of the data collection was part of a pilot study. The pilot study was a small scale version of part of the main study that aimed to trial a focus group as a method of data collection. The objective of this pilot study was to use a focus group of SALTs in order to define social communication. I predicted that a focus group would be an excellent way of listening to the plural voices of others (Denzin & Lincoln, 2000). A group situation would allow participants to hear the viewpoints and opinions of others and agree or disagree with them. It was considered a better approach than a collection of individual interviews, as these would lack the interaction between group participants. In a focus group participants' contributions are refined by what they hear others say (Lewis & Finch, 2003). This is an essential element to provoke a debate regarding a definition of social communication. It allows ideas to emerge from a group and possesses the capacity to become more than the sum of their participants, to achieve a synergy that individuals alone cannot achieve (Krueger, 1994). An important point for consideration for this pilot study is that the interaction between participants can be useful to provide creative thinking, or solutions and strategies (Lewis, 2003).

The sample population was taken from SALTs working for the same PCT in the North West. The recruitment criterion was that participants had to be practising therapists working in the field of paediatrics. An opportunistic sample was used where the sample is chosen from those to whom the researcher has easiest access (Cohen et al., 2000).

Nineteen therapists were sent information sheets, consent forms and an invitation to take part in the study via email. Initially two focus groups were planned, however, from the nineteen contacted only ten responded. It was considered too great a risk to aim for two groups of five subjects. The size and composition of the group is critical in shaping the dynamics and determining how the group process works and focus groups typically involve around six to eight participants and no fewer than four (Lewis & Finch, 2003). Therefore all willing participants were invited to attend the same focus group. Each participant was telephoned with the date and then sent a formal invitation. Out of the ten willing participants, eight confirmed their availability to attend. However, only four attended the group on the day.

The focus group followed the format set out by Lewis and Finch (2003). This identifies five stages; scene setting and general rules, individual introductions, opening topic, discussion and ending the discussion. An independent host facilitated the group. This facilitator was briefed prior to the session regarding the objective of the focus group. He had little previous knowledge of the subject, with the aim of reducing the influence that the facilitator could have in placing preconceived opinions into the discussion. The facilitator was introduced to the group prior to starting the discussion. He introduced himself and explained his background and knowledge in research. The focus group was audio taped. The recording was kept in a lockable cupboard within my office.

Analysis of the Pilot Study Focus Group

The analysis of only one set of data from one focus group has limitations as there is only a small amount of text to create a thematic frame. The purpose of the pilot study was to collect data from SALTs to define the term 'social communication'. I chose to analyse the transcribed data thematically using Attride-Stirling's (2001) model of thematic analysis which is a transparent, logical, and accessible form of analysis. The strength of the model is in the systematic organising of themes and the development of visual mind-map structures. The visual presentation of data supports transparency and honesty. It also provides visual information to support the discussion of the findings to offer clarity for the reader. See appendix 7 for a sample of transcribed an analysed data.

Attride-Stirling (2001) indicates that thematic networks enable the methodical analysis of data. The model allows the organisation of data through the systematisation of text. The analytic process is visible because networks are used to visually represent the steps, and to illustrate how the data is organised.

Three categories of themes are described within Attride-Stirling's thematic networks. Basic themes are portrayed as lower-order premises; organisational themes comprise the grouping of basic themes into more abstract concepts. The final global theme represents the overarching and principal messages from the data. A thematic network is generated through the construction of basic themes derived from a coding framework. Basic themes are summarised into organisational themes and further into global themes. Attride-Stirling (2001) explains that the aim of thematic network analysis is to summarise specific themes in order to enable larger themes to evolve that condense the concepts and ideas that have

emerged at a lower level. This process of thematic analysis involves six stages and these will be considered in the context of my pilot study.

Step 1 - The coding framework and the dissection of text

A coding framework was devised from repeated interaction with the audio recordings and the transcripts from the focus group. Each line of text was considered for key concepts throughout the focus group discussion. The coding framework was constructed from meanings interpreted from the text. Data from the pilot study focus group contained 18 codes that were suggestive of issues outlined by SALTs. The transcript was then dissected into meaningful text segments. Using the coding framework each segment of text was coded and placed within the framework.

Step 2 - The identification of themes

Themes were drawn out from the coded sections of text. This included the identification of common or significant themes within the text segments. The identification of themes within the data is the result of an interpretative process. It is necessary for a theme to be specific whilst also applicable to the pieces of text that emerge in different forms throughout the on-going process of analysis (Attride-Stirling, 2001).

Step 3 - The construction of thematic networks

This stage of analysis involved grouping themes, selecting basic themes, deducing organising themes and formulating global themes. This information was then organised into a visual illustration of the process.

Grouping themes: The themes that were derived from the data were grouped into similar areas. By revisiting the original audio recording and transcript the context of the data was considered. The aim of this was that the grouping of codes replicated the intention and meaning of the focus group participants. The groupings resulted in the formation of global themes, underpinned by organising themes and the initial basic themes identified within the thematic networks.

Selection of the basic themes: The themes were identified and placed into groups and became the 'basic themes'.

Development of organising themes: The basic themes identified were then grouped into organising themes based on their commonalities. For example, the organising theme labelled 'social communication has to take into consideration certain factors' was deduced from the basic themes of 'adapting', 'functional', 'social norms', 'context' and 'how we use language'. The basic themes were dissimilar yet related to the evolving organising theme.

Development of global themes: This section of the process involved the identification of a main statement or over-riding topic from each network. Each global theme represented a multitude of information. However the visual representation of the thematic network allowed transparency and illustrated the decision process for readers and supported the development of the resulting global themes.

Visual representation of thematic networks: This stage allowed the data to be represented in a visual way. Although the grouping of themes may suggest a hierarchy, the visual representation indicates that each theme is the sum of its component parts and can be traced back to its origin and ultimately back to the coded sections or transcript quotes. Each global theme was represented by a thematic network that linked the organisational themes and related basic themes. Colour coding was used in each stage in the development of the themes for ease of reference.

Confirm and revise the networks: following the formulation of the visual networks the text segments associated with each basic theme were reviewed. This was to ensure that the data was reflected through the basic, organising and global themes. Differences and adjustments to the process were rectified at this stage.

Step 4 - Network description and exploration

A thematic network is an instrument that is used during the initial organisation and analysis of data, Attride-Stirling (2001). A network represents the data visually but does not interpret or critically analyse the information represented. Step 4 involved the description of each network and exploration of content. During this stage the themes were explored through revisiting the original transcripts and then giving them consideration in the context of the networks.

Step 5 - Summary of thematic networks

Each network is a summarised model of analysis where key themes are highlighted and underlying patterns clarified. The visual presentation of the networks enabled a level of clarity, and supported the process of transparency.

Step 6- Interpretation of patterns

During the process of interpreting patterns Attride-Stirling (2001) recommends that the researcher should return to the original research question. The objective of this pilot study was to use a focus group in an attempt to define social communication. A review and analysis of the networks was conducted at this point with consideration of 'how SALTs define social communication'.

The findings of the pilot study are outlined in chapter 5. Thematic networks, described as visual, pictorial representations will be included to illustrate and describe the findings from the focus group.

3.7.3 Survey/questionnaire

Following the pilot study I felt that it was necessary to collect data from different professionals who work in the clinical and education setting in order to explore specific concepts relating to social communication. I chose teachers, EPs and SALTs because these three professional groups work with children and young people in a variety of settings and are likely to have experience of working with individuals described as having social communication deficits. I wanted to collect data that complemented the focus group carried out in the pilot study by asking these professionals what they meant by the term 'social communication'. I felt it necessary to explore whether their caseload included children and young people with social communication deficits and if so how they felt issues were being addressed. I wished to compare data across professional groups in order to identify any similarities and differences in their perceptions of social communication. I intended that the questionnaire would explore what intervention is currently offered to children with deficits in social communication and what is thought to be best practice for implementing a service to these children. I felt that a survey would provide me with a broad set of data from a large group of multi-professionals.

Questionnaire construction

Three different questionnaires were designed (see appendix 8); they were based on the same principles and only differed to allow for variations within the professions. The questionnaires were designed to collect both quantitative and qualitative data to explore how key professional stakeholders, paediatric SALTs, EPs and teachers, define the term 'social communication' and to identify what is currently thought to be best practice for implementing a service. The questionnaire combined both open and closed questions. The closed questions used a Likert Scale to enable answers to be given and these provided numerical data. The open ended questions generated qualitative information. A section of the questionnaire was dedicated to six individual case studies. These case studies described the communication profile of individual children. Participants were asked to identify what action they would take to address the child's needs and why. The responses elicited for these case studies provided both quantitative and qualitative data regarding the course of action that participants would take in each scenario. However, at the point of analysis of the findings it was decided that although the data was very interesting it did not contribute to the exploration of social communication in the clinical or educational setting as the scenarios were not sensitive enough to specific social communication issues. The case studies were therefore omitted from the data analysis.

Questionnaire distribution

One hundred and eighteen questionnaires were sent to teachers working within special education in the North West and thirty five were returned, a return rate of 33%. Seventy three questionnaires were sent to EPs in the North West. Twenty one of these questionnaires were returned, a return rate of 29%. Two hundred and three questionnaires were sent to paediatric SALTs working in the North West. Thirty seven of these questionnaires were returned, a return rate of 18%. Therefore a total of 394 questionnaires were sent out across the three professional groups and 93 were returned this is a total return rate of 24%.

Questionnaire one was distributed to teachers working in special schools in the North West. Special schools catering solely for children with severe learning difficulties or solely for those with emotional behavioural difficulties were not included in the sampling process. It was felt necessary to remove the confounding variables of severe cognitive impairment and emotional behavioural, issues thus guiding the researcher to conceptualise

social communication without it being compounded by other variables. The selection of schools was taken from the Social Services Year Book, 32nd Edition (2004). These schools were randomly numbered and a decision was made to randomly select 70% of these schools to be invited to be involved in this study. This percentage was predicted to be a manageable population for a single investigator to organise whilst providing the biggest amount possible. I specifically chose teachers working within the special school setting because at the point of data collection most children with social communication deficits were placed in specialist provision. Each school was contacted by telephone. The Head Teacher of each school was asked for their permission to approach their staff to take part in the completion of questionnaires and the exact number of staff. The corresponding number of questionnaires, information sheets, consent forms and stamped addressed envelopes were sent to each Head Teacher to distribute to teaching staff.

Questionnaire two was distributed to EPs. All Local Education Authorities (LEA) in the North West Region were contacted by telephone. The Principal Educational Psychologist was asked for their permission to approach their staff regarding taking part in the completion of questionnaires and the exact number of staff. The corresponding number of questionnaires, consent forms, information sheets and stamped addressed envelopes were sent to each Principal to distribute to their staff.

Questionnaire three was distributed to SALTs. All NHS Trusts within the North West Region were contacted by telephone. The Speech and Language Therapy Manager was asked for their permission to approach their therapists to take part in the completion of questionnaires, the possibility of attending future focus groups and the exact number of staff. The corresponding number of questionnaires, consent forms, information sheets and stamped addressed envelopes were sent to each Manager to distribute to their staff. Included with this questionnaire was an invite to therapists to participate in the next stage of data collection via a focus group (appendix 9).

Analysis of the survey/questionnaire
All completed questionnaires were collated. The data included two types of information, descriptive numerical data and qualitative data. The numerical data was analysed and two specific sets of data were statistically analysed using the Spearman r correlation coefficient and Chi-Square as a test of independence. The qualitative data was analysed using

thematic analysis and content analysis. Content analysis is an accepted method of investigating text (Joffe & Yardley, 2004). It results in a numerical description of features. Content analysis involves identifying a category or descriptor and counting the number of instances in which they are used in a text. Inferences can be made from the analysis but these should be made by systematically and objectively identifying characteristics of the text (Joffe & Yardley, 2004). Content analysis offers a model of systematic qualitative analysis with clear procedures for checking the quality of the analysis conducted. It produces numerical findings from qualitative data. See appendix 16 for a sample of the analysed data.

3.7.4   Focus groups

Further focus groups were organised using the opportunity sample gained from SALT participants who completed the questionnaires and responded to the invitation to participate in a focus group (appendix 9). Each individual who responded to the invitation was sent an information sheet, consent form and stamped addressed envelope. Twenty nine therapists consented to be involved in focus groups (see appendix 10 for details of focus group participants). All therapists who consented to be included in the focus group were contacted with specific dates. Participants were allocated to the focus group that was most convenient for them to attend. Three focus groups were planned and organised. Two groups had ten participants and one group had nine. These focus groups aimed to provide a richer and more detailed account of what is currently offered to those with social communication deficits and what is thought to be best practice. It enabled participants to explore and share their experiences of working with individuals described as having social communication deficits in the clinical and educational settings.

The pilot study focus group had used an independent facilitator and, although this has ensured independence and detachment from the subject being discussed, I felt that it did not allow for the discussion to follow as natural a course as if it had been facilitated by someone with more subject knowledge. On this basis the focus group was facilitated by me as both clinician (SALT) and researcher. A focus group topic guide with themes, topics and broad questions was designed to provide a framework and structure for the focus group (appendix 11). Each focus group was audio taped. The recordings were kept in a lockable cupboard within my office.

Analysis of focus group data

The focus group recordings were transcribed verbatim. The transcribed data was thematically analysed using Attride-Stirling (2001). The six steps described in the analysis of the pilot study (section 3.7.2) were also applied to the analysis of these focus groups. See appendix 7 for a sample of transcribed an analysed data.

3.7.5   Semi-structured interviews

These used a purposive sample taken from the focus groups. SALTs who were implementing therapy models in the area of social communication were invited to interview to give more detail of the therapy methods used and to provide information specific to therapeutic intervention. This is triangulation and increases respondent validation. The participants were given information sheets, topic guide and consent forms when they had finished the focus group (appendix 12). They were contacted individually to arrange an interview time convenient for them. I travelled to the participant's work place to ensure there was minimum disruption for them. Four participants consented to be interviewed. Two interviews were organised for shortly after the focus group session and two were organised to take place a year on. Only three of the four planned interviews took place as the fourth participant had moved jobs and roles and was no longer carrying out therapeutic intervention. Each interview was more than an hour long and was audio-recorded. The recordings were kept in a lockable cupboard within my office. The recordings were transcribed verbatim.

Analysing the semi-structured interviews data

The transcribed data was analysed using framework analysis, Ritchie and Lewis (2003). This was chosen as the favoured method of analysis because the earlier methods of data collection had generated a data driven framework. Data management involved deciding upon themes under which the data could be labelled, sorted and compared (Ritchie & Lewis, 2003). A framework was constructed using the themes that had already evolved from the synthesis of the literature, the pilot study and the focus groups. These themes were the blocks on which to build a framework. Any new themes that emerged from the semi-structured interviews were to be added into the framework. Any of the themes that were not supported by the interview text were to be removed from the framework. The

result was that a final framework emerged that could be used to analyse thematically the personal narratives from the therapists regarding their own practice.

This framework will be discussed in more detail in chapter 8 where the findings of the semi-structured interviews are presented.

3.8   Summary of Methods

In order to be open and honest I have outlined my own knowledge and experience within the field of social communication (see 3.2). I have then explained my choice of methods and discussed the process of data collection and choice of analytical tools. Table 2 summarises the number of participants that have been involved in this study.

Table 2 - Participant details

Empirical data set	Type of participant	Number of participants
Pilot study	SALTs	4
Survey	Teachers	35
	EPs	21
	SALTs	37
Focus Groups*	SALTs	29
Semi-structured interviews*	SALTs	3
Total number of participants		97
* All focus group and interview participants had already taken part in the survey		

The importance of ethical consideration and how this was accounted for in this study is described and I have detailed how I have ensured the quality of this study in terms of credibility, transferability, dependability, and confirmability. Each method of data collection is then discussed in turn. I have, therefore, provided an accurate account of the methods that I have used in this study. Chapters 4, 5, 6, 7 and 8 will outline and interpret the analysed data gathered using all five data sets.

4 Chapter Four – Literature Synthesis

4.1 Introduction

Typically a PhD thesis would include a literature review which serves to identify what is 'known' and hence the gaps the researcher might profitably address. It also explores the range of methodologies used in prior research and the quality of research generated through application of these methodologies. In this present research, however, the aim is to explore the use of a descriptive term 'social communication' and the concepts that underlie the use of this term by a range of professional groups. Hence, the aim of this literature synthesis is twofold; to place social communication in context in the clinical and educational settings and to extract emerging themes from the literature that can then contribute to a framework for other methods of data collection within this study.

To achieve this, an extensive literature search was undertaken using a specific search strategy (section 4.2) to gather and explore existing evidence systematically, however, the evaluation of the literature culminated in a synthesis of relevant information, as opposed to a review or a critique of the articles. This evidence subsequently helped to develop a holistic picture regarding the origin, nature and development of the term 'social communication'. My analysis of the literature took the form of thematic analysis as already explained in Chapter 3, section 3.7.1. The process of synthesising the literature occurred before, during and after all other methods of data collection (Figure 5).

4.2 Search Strategy

To place social communication in context a search needed to incorporate a wide range of terms including aspects of developmental psychology, linguistics and pragmatics. Each aspect was broken down to produce additional specific topics or variables, for example, developmental psychology was further divided to include, language development, social development and social codes. Initial searches used the Manchester Metropolitan University "search it" tool within the library website which automatically searches specified databases (AMED, ASSIA, CINAHL, Internurse, Linguistics and language behaviour, MEDLINE, PsycINFO, ScienceDirect, SCOPUS and SPORTDiscus). Databases for further search (PubMed, Cochrane etc) were identified. Freetext and

thesaurus searches were carried out on relevant databases individually to enhance the specificity, using Boolan Operators AND or OR to enhance sensitivity. Search results were sifted for relevant articles. Articles were deemed relevant if the title and/or the abstract included information useful to the subject area in the broadest sense. Articles were only rejected if there was no link at all to the subject of this research.

I used my professional judgement to categorise the articles into levels of significance according to the following criteria. Articles mentioning *social communication* were deemed category 1 **- highly significant**, those relating to *pragmatics* deemed category 2 **- significant**, those relating to *development in general*, for example, social development, language development and atypical development were deemed category 3 **- possibly significant**. Articles from all these categories were analysed to form a broad knowledge base for social communication, current intervention models and best practice. Given the amount of literature available, the articles that were deemed category 3 **- possibly significant** were looked at in less detail and those that appeared to make a significant contribution were re-categorised. Anything that was not central to the debate was discarded. Finally cross-referencing was carried out going through the reference lists of category 1 and category 2 articles to retrieve important articles possibly missed by the searches and further enhance the specificity of the search. Appendix 13 presents a table to demonstrate the search strategy and number of articles found for each search term. I searched the literature up to May 2013.

The nature of evidence base within the field of social communication is commented upon in some of the research papers found; it is referred to as "challenging" and "incomplete" (Cridland, 2008; Freeman, Cronin & Candela, 2002). Charman (2011) comments how difficult it is to extract information to inform best practice from the new wave of randomised control trials focusing on social communication; especially because they vary in content, implementation, intensity, setting and deliverer mode. According to Jones and Schwartz (2009) attempting to document and understand social communication deficits of children with autism has recently been a priority for researchers and practitioners across disciplines and theoretical orientations. However they also go on to explain that current research, specifically in high functioning autism, fails to fully explain the complex developmental nature of social communication. Mandy and Skuse (2008) state that the link between repetitive interests, behaviours and activities (RIBA) and social

communication is of paramount importance in diagnostic manuals but is not built on sound empirical foundations. They elaborate this in their extensive research review, identifying only three studies that directly address the relationship; three studies which contradict each other.

Similarly, the scarcity of relevant data within the field of pragmatics is referred to by many experts. Bara, Bosco and Bucciarelli (1999) state that the literature is fragmented and not systematic, Adams, Lloyd, Aldred and Baxendale (2006) comment that there is little systematic evidence and Keen, Rodger, Doussin and Braithewaite (2007) indicate that there are few empirical studies available; this demonstrates that the situation has not changed significantly over recent years. This limited evidence is concerning as the practising clinician is expected to implement intervention strategies and develop services based on best available clinical evidence from systematic research. In addition to the research evidence base being confusing and contradictory, the 'jobbing clinician' will struggle to access anything that is not in RCSLT guidelines or the freely available NHS evidence site https://www.evidence.nhs.uk/.

4.3   Themes

To structure a synthesis of the literature it was necessary to categorise articles to make sense of the issues. It enabled common topics or themes to be identified. These themes could then be considered individually and how these topics linked and related to each other could be recognised. Divergence and inconsistency could also be acknowledged.

By categorising information from the articles in this way the following themes emerged:
- Definition
- Aetiology/underlying causes
- Models of language development
- Measures/assessment
- Intervention
- Outcome

Throughout this thesis these will be referred to as themes and each was used as part of a coding system. As each article was read the themes were identified. These themes form

the structure of the literature synthesis and each theme will be addressed in turn drawing together the literature from searching for 'Social communication', 'Pragmatics' and 'General development, both typical and atypical'. The literature for each theme will be presented and discussed, with conclusions drawn at the end of each theme.

4.3.1 *Definition*

4.3.1.1 *Terminology*

From this systematic search of the literature it is apparent that there is considerable flexibility in terminology used to describe similar domains of communication. Some researchers, for example, Mancil, Conroy and Haydon, 2009; Olney, 2000; Whalen, Ingersoll and Brooke, 2011 use the term 'social communication' in the title of their research project or to label a set of communication skills that they discuss but then do not refer to the term or define it in the main body of the article. Devlin (2009) uses the phrase 'social communication and interaction difficulties' in the title of his paper and then in the introduction changes it to 'social interaction and communication difficulties'. Often researchers, despite using the term 'social communication' in part of their work, will then go on to use other terminology to describe their research project and discuss their findings, for example, pragmatics (Bellon-Harn & Harn, 2006; Kaland, Mortensen & Smith, 2011; Donno, Parker, Gilmour & Skuse, 2010; Gilmour, Hill, Place & Skuse, 2004; Adams, Green, Gilchrist & Cox, 2002; Tadic, Pring & Dale, 2010), interpersonal synchrony (Charman, 2011), social interactions (Jones & Schwartz, 2009; Tadic et al., 2010), social and communication skill (Rubin & Lennon, 2004; Wainer & Ingersoll, 2011), non-verbal communication (Drew, Baird, Taylor, Milne & Charman, 2007), social learning challenges and social learning difficulties (Winner & Crooke, 2011), social thinking (Winner & Crooke, 2011), social skills (Winner and Crooke, 2011) and socio-communicative skill (Tadic, Pring & Dale, 2010). Olswang, Svensson, Coggins, Beilinson and Donaldson (2006) in the section of their paper titled 'Social Communication Behaviours: Measurements and Reliability' refer to four seminal studies as examples of different perspectives for viewing social communication. They refer to Prutting and Kirchner (1987) as evaluating a range of pragmatic parameters, Rice et al. (1990) reporting on social interactive coding, Fujiki, Brinton, Isaacson and Summers (2001) as observing social behaviours and Damico et al. (1999) as describing social communication functioning. It would seem therefore that Olswang et al. (Op Cit) use the terms pragmatic parameters,

social interactive, social behaviours and social communication to mean the same thing. Adams (2005) contends that the term pragmatics has far too long been used synonymously with social communication and goes on to describe how she sees them differently in her framework (to be discussed later in this review in the section 4.3.3 models of language). The Children's Communication Checklist (Bishop, 1998) was devised in order to assess aspects of communicative impairment that are not adequately evaluated by contemporary standardised language tests. These aspects are referred to by Bishop (1998:879) as *"pragmatic abnormalities seen in social communication"*. This links the two terms to describe specific aspects of communication. The terms 'social communication' and 'pragmatics' are also used together in the papers written by Adams, Lockton, Gaile, Earl and Freed (2012); they refer to children who have pragmatic and social communication problems, with or without autism. Gresham, Sugai, and Horner (2001) refer to social competence. Although this is different terminology from social communication it is referring to similar concepts, for example, the ability to interact with peers and to maintain relationships. The importance of social competence is particularly relevant when considering individuals with significant delay in cognitive and academic deficits.

This interchangeable use of terminology was also seen in the articles that I classified as **significant** (those that relate to pragmatics). Adams (2002) carried out a selective review and critique of current formal and informal testing methods and pragmatic analytical procedures. In this article Adams implies that pragmatics is viewed as a part of social communication as the abstract of this paper outlines that,

> *Clinical assessment of pragmatics with the pre-school child should focus on elicitation of communicative intent via naturalistic methods as part of an overall assessment of social communication.*
>
> (Adams, 2002:973)

Adams et al. (2006) believe that to promote the wellbeing of children with Pragmatic Language Impairment (PLI) social communication and language processing must be addressed. By referring to these two elements they are suggesting that these are the two components of pragmatics. Adams and Lloyd (2007) describe children with PLI as presenting with considerable difficulties in using language for the purpose of social communication. This places pragmatics and social communication in the same context; pragmatics is using language for social communication. In a study by Keen et al. (2007)

the term social pragmatics is used in the title of their research but in their abstract they use the term 'social communication'. The article focuses on teaching pragmatic skills but in their conclusions they specify that researchers should examine treatment programmes for 'social language'. The intervention they describe as social-pragmatic focuses on enhancing social communication skills through interactions with the child's primary social partners which take place in every day contexts. Martin and McDonald (2003) use the term pragmatics in their title, the abstract and throughout the main text. However, in the very last paragraph (page 463) they refer to social communication. They state that to explain **pragmatics** clearly, constructs such as theory of mind should be considered and understood. However, research should focus on the mechanisms that underlie **social communication** impairment. Thus they interchange the terms 'social communication' and 'pragmatics'.

The articles found derive from different countries, including the United Kingdom (UK), the United States of America (USA), Norway, Sweden, Germany and the Netherlands. There was no noticeable link between the terminology used and the country of origin.

4.3.1.2 A definition of social communication

Identifying a workable definition of social communication from the literature proved challenging. Jones and Schwartz, (2009:432) state that, *"An operational definition of social communication can vary considerably across studies"*. A total of fourteen operational definitions are identified from this search. Some papers produce more than one definition (Olswang et al., 2001; Adams, 2005). To set this study in context it is important to outline all twelve definitions, in chronological order as follows:

Table 3 – Definitions of social communication identified from this literature search

Definition of Social Communication	Author	Year	Page
Social communication refers to a set of propensities in which complex cognitive and emotional information is communicated through facial expression, emotional gesture, the prosodic melody of speech, and the knowledge of the social rules of communication or pragmatics.	Robertson et al.	1999	738
When describing school age children with social communication problems they state that it is "their inability to communicate appropriately, i.e., social communication. In school they have trouble entering peer groups, resolving conflicts, negotiating, compromising, and having genuine difficulty making and keeping friends."	Olswang et al.	2001	50

Social communication refers to using language in interpersonally appropriate ways to influence people and to interpret events.	Olswang et al.	2001	53
Social communication is the multi-faceted, complex and dynamic use of language that depends upon moment-to-moment processing and person–to-person interactions in the environment. Social communication is embedded in context.	Olswang et al.	2001	64
Social communication is the interdependence of social interaction, social cognition, pragmatics and language processing.	Adams	2005	2
A social communication problem is therefore a limitation in the development of social, cognitive and language skills necessary for contextually-appropriate, meaningful and effective interpersonal communication.	Adams	2005	3
A social communication problem is a descriptive term for a set of observable contextualised child communicative behaviour.	Adams	2005	4
Social communication is considered from the perspective of examining arrays of behaviour that account for how a child spends his/her time during classroom activities.	Olswang et al.	2006	1060
In this intervention, we defined the term social communication as a combination of pragmatic language skills, social behaviours, and cognitive abilities that are required in successful social interactions and relationships. Social communication skills include: communicating needs and thoughts; listening and understanding others; giving and interpreting nonverbal communication; regulating emotions in social interactions; following social boundaries and rules; working with others to tasks; and being assertive.	Dahlberg et al.	2007	1561
Successful social communication skills involve a complex interaction of cognitive abilities, monitoring of speech and language skills, awareness of social rules and boundaries and emotional control.	Dahlberg et al.	2007	1566
Social communication skills include a broad array of verbal and non-verbal behaviours used in reciprocal social interactions.	Wetherby et al.	2007	960
Social communication is viewed as "ongoing verbal and nonverbal behaviours during interactive contexts" which "allows for the observation of behavioural states or dimensions as well as the observation of discrete, momentary behaviours.	Olswang et al.	2010	1690
Their abilities to interpret non-literal, contextual communication such as understanding irony, metaphorical expressions, contrary emotions.	Kaland et al.	2011	1130
The decreased ability to 'converse' non-verbally and verbally with another person, sharing ideas and interests or to negotiate in a positive friendly way. The earliest manifestation of social communication in typically developing children is joint referencing to share an interest, seen in the last part of the first year. People on the autism spectrum also often have problems understanding what is said to them, tending to interpret things literally	Wing et al.	2011	768

These definitions display similarities and divergence. Many of them overlap and include similar concepts but some of them outline unique elements. Tables 4 and 5 demonstrate this:

Table 4: Overlapping elements within the definitions of social communication

Overlapping elements	Specific definition	First author
Pragmatics	Pragmatic language skills	Dahlberg 2007
	Pragmatics	Adams 2005 Robertson 1999
Cognition	Cognitive abilities	Dahlberg 2007
	Social cognition	Adams 2005
Relationships/friendships	Social interactions and relationships	Dahlberg 2007
	Social interaction	Adams 2005
	Genuine difficulty making and keeping friends	Olswang 2001
	Working with others to tasks;	Dahlberg 2007
	Trouble entering peer groups	Olswang 2001
	Sharing ideas and interests in a positive friendly way	Wing 2011
Emotions	Regulating emotions in social interactions	Dahlberg 2007
	Contrary emotions	Kaland 2011
	Emotional gesture	Robertson 1999
Behaviour	Arrays of behaviour	Olswang 2006
	Broad array of verbal and non-verbal behaviours	Wetherby 2007
	Verbal and non-verbal behaviours during interactive contexts	Olswang 2010
	Observation of discrete behaviours	Olswang 2010
	Observable contextualised child communicative behaviour	Adams 2005
	Social behaviours	Dahlberg 2007
Context	Contextually-appropriate, meaningful and effective interpersonal communication	Adams 2005
	Embedded in context	Olswang 2001
	Contextual communication	Kaland 2011
Interpreting non-literal meaning	Interpret non-literal	Kaland 2011
	Interpret things literally	Wing 2011

Table 5: Unique elements within the definitions of social communication

Unique element	First author
Irony	Kaland 2011
Metaphorical expressions	Kaland 2011
Using language in interpersonally appropriate ways to influence people and to interpret events	Olswang 2001
Being assertive	Dahlberg 2007
Resolving conflicts, negotiating	Olswang 2001

Compromising	Olswang 2001
Language processing	Adams 2005
Limitation in the development of social, cognitive and language skills	Adams 2005
Monitoring of speech and language skills	Dahlberg 2007
Complex cognitive and emotional information is communicated	Robertson 1999
Multi-faceted, complex and dynamic use of language	Olswang 2001
Moment-to-moment processing and person–to-person interactions in the environment.	Olswang 2001
Following social boundaries and rules	Dahlberg 2007
Communicating needs and thoughts	Dahlberg 2007
Listening and understanding others	Dahlberg 2007
Giving and interpreting non-verbal communication	Dahlberg 2007
Social rules	Robertson 1999
Prosody	Robertson 1999
Joint referencing	Wing 2011

It would appear that authors define social communication in order to explain the term for the purpose of their piece of research. Even within certain articles several definitions are provided to clarify their perspective at that point in time (Adams, 2005; Olswang et al., 2001). It is not possible to conclude that there are cultural shifts between definitions as the overlaps occur across country origin. It is also impossible to combine all fourteen definitions to create one operational definition as there are so many unique elements generated that this could make any definition unwieldy.

The fact that terminology is interchanged within studies complicates defining social communication. However, when studies are using vocabulary which appears synonymous with social communication it is possible to use this to help describe the term. Two studies are particularly pertinent in identifying what is meant by social communication as they each describe a model or a framework (Olswang et al., 2001; Adams, 2005). These will be discussed later in this synthesis in the section 4.3.3. Several studies list skills that they assign to social communication (Gilmour et al., 2004; Hedge, 2006; Charman, 2011; Kaland et al., 2011) and these begin to characterise social communication in its broadest sense. Furthermore, when a study investigates the impact of an intervention upon social communication skills then the factors measured could be considered to be separate elements of social communication. For the purpose of this study these identified skills will be called social communication domains. These social communication domains can contribute to an overall profile of social communication rather than a specific definition.

The table in appendix 14 displays social communication domains that have been identified and collated from this search of the literature.

By identifying domains to create a profile of social communication it is of paramount importance that these are not seen as isolated components but that they are to be viewed as integrated segments of the whole concept. Each segment combines with the other to create the final success in social communication, for example, joint attention needs to be integrated with eye gaze, gesture, intent and emotional recognition to produce a successful social communication exchange. Although successful communication does not need each domain to be intact, too many deficits in the profile will reduce the performance.

Jones and Schwartz (2009) suggest that rather than social communication being broken into a set of isolated skills it should be viewed with scope and sequence similar to how other complex skills are viewed. This integration of skills is reinforced by Freeman's use of the term *"spectrum of social communication learning disability"* (2002:145). Olswang et al. (2006) create a modular view of social communication and identify six behavioural dimensions that they use as a social communicative representation of discrete behaviours. The six dimensions can be considered as social communication domains, and contribute to developing a profile of social communication.

Defining social communication is complicated further by the likelihood that it changes with age and becomes increasingly complex, (Olswang et al., 2001; Jones & Schwartz, 2009). Winner and Crooke (2011), state that the mechanisms of social communication become more complex during adolescence. They are finely tuned and nuance-based. They believe that most adolescents figure out intuitively how to get by. This reinforces the subtle nature of social communication skills and the necessity to blend and integrate the individual domains to enable successful interchange. It also highlights the importance of social insight and social intuition in successful communication.

4.3.1.3 A definition of pragmatics

In the 1980s there was a surge in the literature regarding pragmatics. McTear (1985) explains that the term pragmatics is used to cover a variety of issues connected to the use of language. Almost 30 years ago McTear (1985) suggested that there was terminological

confusion in the literature. He described a disorder of language pragmatics as including, lack of attention-getting devices, problems in establishing references, turn-taking problems, inappropriate or irrelevant use of language, restricted range of speech acts and an inability to repair conversation breakdown. Some studies refer to specific aspects in relation to pragmatics, for example, 'Social Inferences' (Liu, Pham & Holyoak, 1997) and idiom comprehension (Kerbal & Grunwell, 1998).

In the literature there are many definitions of pragmatics. The following table outlines the definitions identified in this literature synthesis. This table can be viewed in conjunction with Table 3 (section 4.3.1.2) earlier that outlines the definitions of social communication in order to generate a definitive overview of both terms.

Table 6 - Definitions of pragmatics identified from this literature search

Definition of Pragmatics	Author	Year	Page
Assumptions that people make when they communicate the intentions underlying what they say, the way context influences the amount they say or the way they say it, the turn taking which makes a conversation run smoothly and the appropriateness of the subject matter to the situation	Crystal	1987	49
The receptive and expressive ability regarding conversational structure, non-verbal communication and prosody	Ramberg et al.	1996	390
Individuals' abilities to interpret meaning as speakers intend, dependent upon choices governed by linguistic and non-linguistic context	Rinaldi	2000	2
The term 'language pragmatics' refers to a group of behaviours that are concerned with how language is used to convey meanings	Adams	2002	973
Whilst semantics refers to language meaning in its literal, context-independent usage, pragmatics is arguably a more complex concept, necessary to explain how meaning is derived from the social context	Martin and McDonald	2003	452
Pragmatic language is broad reaching, encompassing a wide range of contextual influences on language meaning and a variety of models of behaviour	Martin and McDonald	2003	462
Pragmatic language impairment may be defined as the mismatch between language and the situation in which it is used, so that the language employed is in the same way inappropriate to the situational demands	Volden and Lord as cited in Volden et al.	2009	388
A broad array of social linguistic skills, such as using contextual information to interpret incoming utterances, the ability to comprehend non-literal/figurative expressions (such as jokes and irony), and inferring implicit messages	Geurts and Embrechts	2010	437

In a similar way to the definitions of social communication, identified and outlined earlier, the definitions of pragmatic language show similarities and divergence. There are overlaps and unique elements. Tables 7 and 8 demonstrate this,

Table 7: Overlapping elements within the definitions of pragmatics

Overlapping elements	Specific definition	First author
Meaning	Convey meaning	Adams 2002
	Interpret meaning	Rinaldi 2000
	Interpret incoming utterances	Geurts & Embrechts 2010
	Meaning is derived from context	Martin & McDonald 2003
Language use	Language is used	Adams 2002
	Language and the situation in which it is used	Volden 2009
Intention	Speakers intend	Rinaldi 2000
	Intention underlying	Crystal 1987
Conversation	Conversation run smoothly	Crystal 1987
	Conversational structure	Ramberg 1996
Behaviour	Group of behaviour	Adams 2002
	Models of behaviours	Martin & McDonald 2003
Context	Governed by linguistic and non-linguistic context	Adams 2002
	The way context influences	Crystal 1987
	Using contextual information	Geurts & Embrechts 2010
	Meaning is derived from social context	Martin & McDonald 2003
	Range of contextual influences	Martin & McDonald 2003
Situation	To the situation	Crystal 1987
	Situational demands	Volden 2009
Appropriate	Appropriateness of the subject matter	Crystal 1987
	Same way inappropriate	Volden 2009
Range	Broad range	Geurts & Embrechts 2010
	Wide ranging	Martin & McDonald 2003

Table 8: Unique elements within the definitions of pragmatics

Unique element	First author
Dependent	Rinaldi 2000
Assumptions	Crystal 1987
Turn taking	Crystal 1987
Social linguistic skills	Geurts & Embrechts 2010
Non-literal/figurative	Geurts & Embrechts 2010
Inferring	Geurts & Embrechts 2010
Mismatch between language and the situation in which it is used	Volden 2009
Non-verbal	Ramberg 1996
Prosody	Ramberg 1996

Ramberg, Ehlers, Nyden, Johansson and Gillberg (1996) investigated language and pragmatic functions in school age children with a diagnosis of autistic spectrum disorder (ASD). According to these authors pragmatics requires the ability to use language both receptively and expressively across contexts and it is reliant on both cognitive and social competencies combined with linguistics.

Bara et al. (1999) write about Developmental Pragmatics. They explain that being competent in pragmatics requires the use of both linguistic and extra-linguistic communication in context. Pragmatic competence precedes linguistic competence as children are able to communicate before they can produce their first words.

Richardson and Klecan-Aker (2000) investigated the effectiveness of a treatment programme. The study uses pragmatics in the title of the article and refers to baseline measures of pragmatic skills. They describe the test to measure pragmatic skills as having two sections; social skills and language use. Social skills are identified as spontaneous conversation, starting, maintaining and ending conversations, asking for help, discriminating responses and emotions. Language use is the labelling and describing of objects. They then define social language as, knowing when it is appropriate to switch topics in conversation, what appropriate comments to make in class and out of class, and how to give appropriate comments to authority figures. They go on to explain that the cause of pragmatic language is difficult to define and is not likely to be unitary.

As with social communication, there is very little information within the literature that describes the developmental trajectory of pragmatic skills. Adams (2002) explains that the knowledge of developmental 'norms' is limited and therefore she generates information from the literature to enable her to list the approximate age of the emergence of specific skills. Adams (2002:975) lists pragmatic behaviours in a developmental profile citing references.

Adams et al. (2006) investigated the effectiveness of a communication intervention for developing pragmatic skills in six children with Pragmatic Language Impairment (PLI). They tested specific areas prior to intervention: inferential comprehension, narrative, sentence formulation, and sentence recall skills. They also list the deficits that children with PLI have: difficulty with interpersonal use of language in social contexts, difficulty with turn taking, difficulty in developing conversation skills, difficulty in interpreting subtle language meaning, difficulty in gauging the listeners' needs and these children are described as verbose. They describe their intervention to teach the pragmatic rules in discourse and conversations, turn-taking, meta-pragmatics, social understanding and social role play as well as inferential understanding. From this they devise indices of conversational behaviour which include discourse participation, conversational dominance, loquacity, assertiveness, verbosity and verbal responsiveness.

Adams and Lloyd (2007) list eleven specific difficulties encountered by children with PLI. They state that they are verbose, talk about their own preoccupations, show insensitivity to the listeners' needs, use over-literal language, have difficulties with conversational skills, turn-taking, adhering to conversational topics, comprehending discourse, using narrative skills, making social inferences and social cognition.

Volden, Coolican, Garon, White and Bryson (2009), in a brief report about pragmatic language in ASD, list several specific pragmatic difficulties that can be experienced, these are topic initiation, relevant comments, knowing how much information is relevant to include in an utterance and maintaining the topic of conversation.

By collating all the associated elements believed to be part of pragmatics and extracting information from the definitions, an overall profile of pragmatics can replace a specific definition. In exactly the same way, as described earlier in order to define social

communication, the table in appendix 15 displays pragmatic elements (domains) that have been identified and collated from this systematic search of the literature. These domains will contribute to the discussion regarding defining social communication in Chapter 9 (9.3.1.2)

4.3.1.4 Diagnosis and terminology

This section of the literature synthesis aims to explore the literature in terms of medical versus SALT diagnoses and the complex myriad of medical, linguistic and social-educational terminologies.

> *Developmental disorders of language and communication present considerable diagnostic challenges due to the overlapping of symptomatology and uncertain aetiology*
>
> (Gibson, Adams, Lockton & Green, 2013:1)

Many clinical diagnoses are made by detailing and observing behaviours. Using the diagnosis of autism as an example, medical professionals, psychologists and allied health professionals may use specific diagnostic tools in order to elicit behaviour, for example, Autism Diagnostic Observation Schedule (Lord, Rutter, Dilavore & Risi, 2002). They will also take a detailed case history and the information gained will be logged and analysed. Diagnostic manuals are used in order to cross reference data against set criteria to make a diagnosis. In the UK the manual used is the International Classification of Diseases (ICD-10R; World Health Organisation, 1993) and in USA it is the Diagnostic and Statistical Manual (DSM-IV-TR; American Psychiatric Association 2000). Although the ICD-10R is the primary manual in the UK, the DSM has considerable international influence. Any changes in this manual are likely to have ramifications in the UK. Currently there is a great deal of controversy regarding the proposed changes in the diagnostic criteria for autism in the current review of the DSM-IV as the DSM-V is developed. Wilson, Gillan, Robertson, Roberts, Murphy and Murphy (2013) provide a rationale for these changes, explaining that a diagnosis is based on three domains: impaired social interaction, abnormal communication, and restricted and repetitive behaviours and interests. They state that there are problems with the current diagnostic algorithms; one of these being that it is very difficult to distinguish between the 'social' domain and the 'communication' domain as almost any communication is social. The new criteria propose to reduce the

three domains to two and combine the 'social' and 'communication' into a single set. A new diagnostic category called Social Communication Disorder (SCD) is proposed. A very recent study by Gibson et al. (2013) aims to clarify the behavioural and linguistic profile associated with impairment of social communication outside of an autism diagnosis. Their findings support the proposal in the DSM-V for a distinction between autism and a non-autism 'social communication disorder' based on the presence or absence of restricted and repetitive behaviours/interests and a social disorder related to pragmatic language impairment. The reviewing of the criteria of autism is causing considerable concern amongst professionals working with children described as having social communication deficits. This high profile international debate regarding diagnostic criteria highlights the level of confusion there is regarding terminology within the educational and clinical context with regards to both children and adults who display unusual communication traits. I will discuss these changes in the light of the findings from this research in chapter 9.

Well before the debate regarding revised diagnostic criteria for autism, experts in the field noticed considerable overlapping of symptomatology. In 1987 Bishop and Rosenbloom classified language impaired children and identified a subgroup in which language content was more problematic than structural language difficulties. This group was described as having semantic-pragmatic disorder and was more recently described as having PLI (Bishop, 2000). Landa (2005) suggests that PLI is used to describe children who have relatively intact phonology, syntax and verbal fluency and yet they exhibit communicative problems in specific areas; understanding and conveying intentions, the ability to adhere to the needs of a conversational partner as well as discourse management skills. Botting and Conti-Ramsden (1999) and Bishop and Norbury (2002) suggested an overlap between ASD and PLI; Bishop (2000) proposed that pragmatic language impairment is an intermediate condition between autism and specific language impairment. Donlan and Masters (2000) comment that precise distinctions between diagnostic categories are not universal and a spectrum of disorders ranging from SLI to autism exist. Botting and Conti-Ramsden (1999) refer to the 'borderlands' of autism when discussing children with pragmatic language impairment without autism and their findings support the view that pragmatic problems can exist for children not meeting the criteria for autistic disorder.

Adams, Green, Gilchrist and Cox (2002), in their analysis of the difficulties demonstrated with the use of language in adolescents who have Asperger's Syndrome (AS), state that there seems to be evidence that there are identifiable pragmatic impairments in individuals with AS that appear to be similar to those in high functioning autism and in some forms of developmental language impairment. Also in 2002, Freeman et al. questioned whether AS is in fact a separate diagnostic category, distinct from autism or is on the spectrum of social communication learning disability. Based on diagnostic criteria as well as empirical research, individuals with Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS) also appear to exhibit similar social cognitive profiles to children with high functioning autism and AS. These three disorders share many characteristics and include a common feature of quality of impairment in reciprocal social interaction (Solomon, Goodlin-Jones & Anders, 2004).

Gilmour et al. (2004:967) describe how there is a blurring of the boundaries between deficits in pragmatic skills, social communication and disorders on the autistic spectrum. In their research they chose to blend the three and describe a clinical profile as 'social communication deficits'. This blurring of the boundaries is also apparent when reading other papers identified by this systematic search. It is reinforced by Adams (2005) when she describes the synergistic emergence of social interaction, social cognition, pragmatics and language processing as the foundations to social communication. Ketelaars et al. (2010:204) write about the link between PLI and associated behaviour problems stating that *"The diagnosis of Pragmatic Language Impairment is given to children who show difficulties with the use of language in context"*. Ketelaars et al. (2010) believe that there is much dispute about the classification of PLI and that the validity of the term has been under scrutiny due to the symptom resemblance with autistic spectrum disorders such as PDD-NOS and Asperger's syndrome. They reinforce the concept of a blurring of the boundaries and they discuss the possible overlap between PLI and autism. They also suggest that PLI can be classified as a subgroup of Specific Language Impairment (SLI). Cummings (2010:16) states that *"There is considerable disarray about what constitutes a pragmatic disorder"*.

Social communication is identified in a number of clinical fields and is especially prevalent in literature associated with autism (for example, Bolte, Westerwald, Holtmann, Freitag & Poustka, 2011; Charman, 2011; Jones & Schwartz, 2009). Despite literature stating that

social communication is a fundamental deficit in autism (Mandy & Skuse, 2008; Adams et al., 2002; Bellon-Harn & Harn, 2006), the autism screening assessment "The Autism-Spectrum Quotient (AQ)-Adolescent Version" (Baron-Cohen, Hoekstra, Knickmeyer & Wheelwright, 2006) does not have a social communication sub-section. It contains sections termed social skill, attention switching, attention to detail, communication and imagination. What remains unclear is how these sections may be viewed in relation to the term social communication.

Adams et al. (2006:44) refer to the *"fuzzy region of diagnosis"*. They go on to explain that it is the individual profiles that should inform the approach that is taken with these individuals. The aetiology is not as important as the profile. Given the diversity of the views above, regardless of the disorder, heading or term used, it is of paramount importance that the profile is described; it can then be measured, intervention can be implemented, outcome can be described and function can be considered.

Conclusions and synthesis regarding the theme 'definition'
The data drawn from the literature highlights the interchangeable use of terminology. The fluidity with which terminology is used appears within descriptive studies, intervention studies and also within theoretical pieces; individual authors use a variety of different terms in order to describe the same set of parameters. It can be concluded that all this interchangeable use of terminology confounds an accurate definition of exactly what is meant by the term social communication in research and in the clinical setting. It seems likely this will impact on how professionals address the needs of those with communication difficulties and how they explain these difficulties to parents and carers.

One example of this within a single author can be seen in the work of Adams. It appears that when Adams refers to social communication, for example, in her 2005 framework, she is discussing the same concepts that she addresses in her articles regarding pragmatics. In 2005 Adams based her framework for social communication on the synergistic emergence of social interaction, social cognition, pragmatics and language processing. In an earlier paper, Adams (2002) described language pragmatics as an interface between cognitive, social and linguistic development. It seems that the concepts that Adams refers to in her earlier work as *pragmatic skills* are referred to in her more recent work as *social communication*. This culminates in the most recent papers by Adams et al. (2012) that use

social communication and pragmatics together to describe children with and without autism.

Evidence within the literature supports the notion that the term 'social communication' is difficult to define and that there is commonality and divergence in trying to do so. However, when analysing the data collected under the theme 'definition of pragmatics' it would seem that there is evidence to support the view that the term pragmatics is equally difficult to define. When comparing the overlapping elements in the definitions of both it is noticeable that there are similarities between the two. In fact, as can be seen in Table 9, both groups of definitions include almost identical elements when analysed in this way. This may indicate that social communication and pragmatics can be perceived as synonymous. Tables in appendix 14 and 15 illustrate how synthesis of the literature has enabled me to identify social communication domains and pragmatic domains and their reference source. There is a great deal of similarity between these domains and Table 9 below details these similarities.

Table 9 - Domains of 'social communication' and 'pragmatics'; an overlap

Overall domain	Social Communication Domain	Pragmatic Domain
Inference	Inferential aspects of language Irony Understanding jokes and sarcasm Metaphoric language Modifying interpretation of ambiguity	Social inferences/inferred meaning Idiom comprehension Interpreting subtle language meaning Ambiguous/literal/figurative language
Language comprehension	Language understanding Sentence recall Listening and understanding others	Interpret meaning Comprehending discourse Listener awareness
Expressive language	Production of adjectives and verbs in sentences and phrases "Mands"- requests, demands and various forms of questions Negative sentences Passive sentences Verbal requests Explaining thoughts and behaviours Affect sharing/expression	Sentence formulation Descriptions of objects Labelling Asking for help Narrative skills
Non-verbal communication and context	Understanding intentions Other peoples intentions Joint attention Joint engagement Turn-takings/sharing across turns/extended turn taking Maintaining information Non-verbal social communication	Attention getting devices Establishing references Turn-taking Starting maintaining and ending conversations Topic maintenance Non-verbal communication Context

	exchange Gestures Eye gaze/gaze shifts Requesting behaviours; gives, reaches, points to request, Imitation Vocalisation Giving and interpreting Interpreting thoughts and behaviours of others Prosody and intonation Hostile/coercive behaviour Pro-social/engaged behaviour Assertive behaviour Passive/disengaged behaviour Understanding communicative intentions Responding to bids Acts of behaviour regulation	Pre-verbal communicative intentions Prosody
Imagination	Symbolic play/functional and pretend play Symbol use/symbolic behaviour	Social role play
Conversation skills	Conversational abilities/style/skills Repairing communication Negotiating conflicts with peers	Spontaneous conversation Conversation repair Turn taking repair Making clarifications
Communication rules	Using polite forms Rules of communicating Engagement	Relevance/appropriate comments Topic initiation Manners/polite forms
Social knowledge	Acts of social interaction Following social boundaries and rules Social blunders Social isolation Social affective signalling/shared affect Social intentions Social reciprocity	Interpersonal use of language Social understanding Social cognition
Atypical aspects	Repetitive rituals	Talk about own pre-occupation Verbosity
Emotions	Emotional recognition Communicating need and thoughts Regulating emotions Understanding contrary emotions Understanding jealousy Acts of behaviour regulation	Internal responses (emotions)

Specific domains for social communication correlated with specific domains for pragmatics. These then provided the following overall domains; inference, language comprehension, expressive language, non-verbal communication and context, imagination, conversation skills, communication rules, social knowledge, atypical aspects and finally

emotions. Many of the pragmatic behaviours listed by Adams (2002:975) are the same or similar to the aspects that I have extracted from the literature as social communication domains. Exploring the literature in this way reinforces that the terms pragmatics and social communication are used within research and theoretical texts to mean the same thing or at the very least to refer to the same aspects of communication. This literature synthesis highlights that the level of confusion described by McTear in 1985 is still present in more recent years (Adams, 2002; Ketelaars et al., 2010; Cummings, 2010).

This confusing use of terminology and overlap of definitions may account for the blurring of the boundaries described by Gilmore et al. (2004) in relation to pragmatic impairment, social communication impairment and the autistic spectrum. This overlap is further emphasised with the review of the diagnostic criteria for autism and the related paper by Gibson et al. (2013) that elucidates the overlapping symptomatology between PLI, SLI and autism. Depending on the diagnosis, the terminology may differ. There is a wealth of literature in autism and this thesis has had to consolidate the information to outline pertinent issues that link autism to social communication. For the purpose of this research autism will be discussed within themes as appropriate.

4.3.2 Aetiology

The literature synthesis identified a number of aspects that are considered as underlying causes of social communication deficits. Many of these causes are also specified as factors affecting pragmatic development. Olswang et al. (2001) commented that for years social communication deficits have been seen as a core feature of ASD but that other populations have also been found to exhibit deficits in social-communication. They believe that although the aetiology differs, the social communication deficits observed are similar. Adams (2005) agrees that social communication impairments are not specific to one diagnostic group and that social communication is not a single entity within a medical categorical model.

Martin and McDonald (2003:451) emphasise that *"deficits in pragmatic language ability are common to a number of populations, for example, right-hemisphere damage, autism and traumatic brain injury"*. They elaborate by stating that *"causal explanations for pragmatic difficulties across these populations are divergent and sometimes*

contradictory". They list nine domains of pragmatics that occur in autism, right hemisphere damage and traumatic brain injury and they conclude that regardless of the cause the same pragmatic difficulties occur. They believe that there are divergent perspectives regarding pragmatics and that the reason for this is that these deficits exist in a number of populations. Martin and McDonald, (2003:462) explain how the same pragmatic deficit can originate from three different theoretical perspectives, producing three different mechanisms. This reinforces the fact that regardless of the aetiology the same pragmatic deficits can impair the individual's ability to communicate. Gibson et al. (2013) aim to clarify the linguistic and behavioural profiles of individuals with impairments in social communication; they pose the question 'Does social communication disorder exist outside autism?' There is overlapping symptomatology between PLI, High Functioning Autism and SLI and it is possible that all three are underlying causes of social communication deficits.

4.3.2.1 Autism Spectrum Disorder

This literature search identified many papers that linked ASD with social communication deficits (Robertson, Tanguay, L'Ecuyer, Sims & Waltrip, 1999; Adams et al., 2002; Hanley-Hochdorfer, Bray, Kehle, & Elinoff, 2010) and pragmatic language difficulties (Ramberg et al., 1996; Gilmour et al., 2004; Philofsky, Fidler & Hepburn, 2007). This suggests that the communication difficulties referred to in a child diagnosed as autistic can be described as social communication deficits or pragmatic language difficulties. It is simply a case of preferred terminology. Volden et al. (2009), in their brief report discussing pragmatic language in ASD, emphasise that pragmatic skills are regarded as an area of "universal deficit" in ASD. However they remark upon the fact that there is limited knowledge about the development of pragmatics or how it may impact on the skills needed to function in context.

4.3.2.2 Visual Impairment (VI)

Tadic et al. (2010) in their research of language and social communication skills in children with congenital visual impairment (VI) conclude that individuals with VI performed significantly better than sighted children, of a similar age and verbal ability, on a standardised test of language. However, by contrast the VI children showed significantly poorer socio-communicative ability than sighted peers. These conclusions were based on

parents completing the Children's Communication Checklist – 2 (CCC-2, Bishop, 2003) and not on observations, so subjectivity may influence the accuracy. However, they go on to determine that a substantial proportion of children with VI showed a level of socio-communicative difficulty consistent with the broader autism spectrum in sighted children.

4.3.2.3 Traumatic Brain Injury (TBI)

Bara et al.'s (1999) review of the current theories of pragmatics includes traumatic brain injury and also autism. Although the following paper relates to the adult population it is interesting to note that Dahlberg, Cusick, Hawley, Newman, Morey, Harrison-Felix and Whiteneck (2007) investigated the treatment efficacy of social communication skills training in traumatic brain injury (TBI). They believe that social communication impairment is among the most pervasive of communication problems post injury in the chronic stages of TBI.

4.3.2.4 Foetal Alcohol Spectrum Disorder (FASD)

Coggins, Olswang, Carmichael and Timler (2003) investigated the impact that pre-natal alcohol exposure has on the social communicative abilities of school age children. Olswang et al. (2010) observed classroom social communication skills of children with Foetal Alcohol Spectrum Disorders (FASD); they used a highly structured coding system during observations. They conclude that children with mild FASD perform differently from their peers in regard to classroom social communication, when measuring social communication by behavioural dimensions.

4.3.2.5 Challenging behaviour

Donno, Parker, Gilmour and Skuse (2010) studied the social communication deficits in disruptive primary-school children. They conclude that disruptive children do have social communication deficits and that these deficits are likely to have a causal role in the development of disruptive behaviour. They believe that many children with a diagnosis of conduct disorder warrant a diagnosis of ASD based on the severity of their social communication difficulties but that this has been overlooked. Their research used many methods to measure what they mean by social communication including questionnaires and observations. My clinical experience supports this study as many pupils who display

oppositional or disruptive behaviour demonstrate significant deficits in their social communication skills, however, the disruption caused by their negative behaviours becomes the primary barrier to accessing education and the underlying cause of their behaviour is often masked.

Mackie and Law's (2010) small scale pilot study explored the interaction between behaviour and communication disability. They focused specifically on pragmatic language and emotional behavioural difficulties. They refer to the wealth of literature that identifies a high incidence of language and communication needs in children with emotional and behavioural difficulties (EBD). The literature they refer to suggests that children with EBD may frequently have language difficulties that have not been recognised. Mackie and Law (2010:399) state that *"It is well recognised that children with behavioural disorders have problems with their social communication skills"*. Although their study was small in scale and limited, their results indicate that approximately two thirds of the group of children identified as having behaviour causing concern in school had pragmatic language difficulties. They conclude that by using a more robust assessment of pragmatic language skills (CCC-2, Bishop 2003) it has been possible to assess more fully the underlying pragmatic ability of children with EBD. This has enabled consideration to be given to whether they have more pervasive difficulties with the underlying pragmatic skills rather than a lack of exposure, practise, or willingness affecting their social competence.

Ketelaars et al. (2010) aim to clarify the incidence and nature of behavioural problems in children with PLI. The study was conducted using a large sample of 1364 children aged four years old. The CCC (Bishop, 1998) and the Strengths and Difficulties Questionnaire (Goodman, 1997) were used to measure pragmatic competency. Results demonstrate that pragmatic competence is interconnected with behavioural problems. They conclude that behaviour problems can be explained by pragmatic problems. Structural language difficulties alone do not account for the extensive nature of the pragmatic difficulties and the behaviour issues. They suggest that pragmatic language problems cannot be dismissed as immaturity, although they acknowledge that it is too early to draw definite conclusions from their research. They cite work by Bishop (2000) and Bishop and Norbury (2002) and suggest that although pragmatic language problems are a part of autism it does not rule out the possibility they can occur separately from autism. They also cite Gertner et al. (1994) and Redmond and Rice (1998) claiming that pragmatic language problems are a secondary

consequence of structural language problems. Considering the information it appears that there is a strong link between language deficits, pragmatics deficits and behavioural difficulties but there is contradiction over which is the primary concern.

Ketelaars et al. (2010) discuss the idea that pragmatic language problems often remain underexposed because they are so difficult to detect. They believe that a pragmatic language problem may exist because of an underlying disorder. The strong relationship between behaviour problems and pragmatic deficits may well be a result of an underlying disorder whose symptoms include both pragmatic difficulties and behavioural problems. They infer that it is difficult to identify the origin of social communication difficulties and that there is confusion as to the primary difficulties for these children.

> *The restricted language skills of children may inhibit social experiences, which in turn can lead to inappropriate language use. The current classification of PLI as a standard subtype is debateable.*
>
> (Ketelaars et al., 2010:205)

4.3.2.6 Specific Language Impairment (SLI)

Pragmatics is traditionally seen as a secondary issue to Specific Language Impairment when children have specific difficulties with the structural aspects of language (Miller, 1991, cited in Bishop, Chan, Adams, Hartley & Weir, 2000). However, it is reported by Bishop et al. (2000) that there is a subset of children who have pragmatic difficulties which cannot be accounted for as secondary to language impairment. Their study analysed the conversation responsiveness in children with SLI to investigate if there were disproportionate pragmatic difficulties in a subset of children. They compared 18 children with SLI to nine children matched by age and non-verbal ability and nine younger children of comparable language level. They conclude that for some children conversational difficulties may reflect a more fundamental problem in understanding or expressing communicative intentions. This study indicates that although structural language difficulties can cause pragmatic language issues (reduced conversational skills) there is a sub-group who have broader communication problems as a primary issue; their conversational difficulties may reflect more fundamental problems in understanding or expressing communication intentions.

Ryder, Leinonen and Schulz (2008) take a cognitive approach to assessing pragmatic language comprehension in children with SLI. In their study of 99 children, 27 with SLI and 32 typically developing children, they conclude that children with SLI and PLI are found to be developmentally delayed at making inferences and the children with PLI have particular difficulty in integrating contextual information.

A research study by Katsos, Roqueta, Estevan and Cummins (2011) investigated whether children with SLI are challenged with regard to specific pragmatic skills. They discovered that children with SLI performed more poorly than a group of age-matched, typically developing peers. Children with SLI were disproportionately challenged by interpreting pragmatic comprehension compared to their age matched peers. Their findings document that children with SLI face difficulties with pragmatics but these difficulties are in keeping with their overall language comprehension rather than exceeding them.

Adams (2002:974) states that a developmental pragmatic disorder is not solely connected to specific diagnoses such as autism, Asperger's or ADHD. She cites Prutting and Kirchner (1987) who believe that *"pragmatic difficulties can arise as a secondary feature of any developmental language impairment due to limited communication ability"*.

Rinaldi (2000) explored the hypothesis that there may be particular difficulties for secondary school students with specific developmental language disorder in understanding pragmatic meaning. She concludes that this population of students were significantly less able to use context to understand implied meaning than non-impaired students.

Specific language impairment is sometimes thought to be associated with concurrent difficulties in the area of social and behavioural development but problems with social relationships may be characteristic of children with SLI well after language difficulties have resolved (Conti-Ramsden & Botting, 2004). In 2008 Botting and Conti-Ramsden commented more specifically on the link between social skill and SLI. They investigate the role of language, social cognition and social skill in the functional social outcome of adolescents with and without a history of SLI. Their study included a large cohort of 134 young people with a history of SLI and 124 typically developing young people of the same age. Findings suggest that poor language may have a complex role in social development.

Associations were found between social cognition, language and social behaviours with the strongest link between language and social cognition.

Botting (2004) explored whether different subgroups of children with communication disorders score differently on the CCC. A sample of 161 eleven year olds with a history of communication disorders was assessed using the CCC. The aim was to identify if pragmatic impairments were a part of the child's communication difficulty. The cohort was separated into four diagnostic subgroups; ASD, SLI, generally impaired (low performance IQ and concurrent language impairment) and primary pragmatic language impairment. The majority of children scored below the normal range for pragmatic skill at eleven years of age. Children with PLI scored significantly better than those with ASD despite similar clinical histories.

Conclusions and synthesis regarding the theme 'aetiology'

As mentioned in chapter one of this thesis, my own clinical practice and experience led me to hypothesise that there are three different types of social communication deficits: immature, atypical and those secondary to other issues. I believed that these different types of social communication deficits were influenced by the aetiology or underlying cause. To some extent the information from the literature supports this hypothesis. However, it is very difficult to identify separate types of social communication deficit as there is considerable interconnectivity and every child regardless of their disorder or diagnosis will have a unique profile. The data from the literature regarding the aetiology and underlying causes of social communication deficits implies that there are two factors that are occurring simultaneously; these are the underlying cause or aetiology and the behavioural manifestation. This may indicate that social communication has a primary or secondary origin and can present as typical or atypical. For example, it would seem that research studies show that some children have identified pragmatic difficulties or social communication deficits that are due to their difficulties with structural language. This can be classed as social communication difficulties that are secondary to SLI. However, there are some children that experience pragmatic or social communication that are not part of an autistic spectrum disorder but are atypical in nature and are a primary area of deficit.

The comment made by Tadic et al. (2012) that children with VI showed a level of socio-communicative difficulty consistent with the broader autism spectrum in sighted children is an important point when considering the underlying causes of social communication deficits. It could be considered that children with visual impairment fit into the category of a social communication deficit as secondary, however, the mentioned similarity to autism spectrum makes it less obvious to categorise. Perhaps, the underlying cause is not as significant compared to the need to accurately identifying the profile of social communication deficits. Freeman et al. (2002) believe that regardless of the diagnostic category a considerable number of children and adults with, what they describe as, social communication learning disability require intervention.

4.3.3   *Models of language development*

A concern for this thesis was how social communication fits within the broader models of speech, language and communication. Olswang et al. (2001) and Adams (2005) both write valuable papers with regard to developing a framework for social communication. Various models or theories of language and pragmatics help to contribute to the holistic framework of communication.

From an original model presented by Morris, (1938) cited in Rinaldi (2000) more than twenty models have been developed over the last thirty five years; Bloom and Lahey, (1978); Leech (1983); Roth and Spekman (1984); McTear (1985); McTear and Conti-Ramsden (1992); Semin and Fielder (1992); Tomasello (1992); Brinton and Fujiki (1993); Ramberg et al. (1996); Redmond and Rice (1999); Kelly and Barr (1999); Bara (1999); Richardson and Klecan-Aker (2000); Rinaldi (2000); Bishop et al. (2000); Olswang (2001); Martin and McDonald (2003); Adams (2005); Fielder (2007); Volden et al. (2009) and Tadic et al. (2010). The next section will highlight the key trends and changes within these models and extract what each model says about social communication and pragmatics. This will identify how the models have evolved over time and the journey that places social communication in context.

The concept of pragmatics was used by Morris (1938) and there was a clear divide between pragmatics as an interpretation of non-verbal information and semantics as the interpretation of language meaning. This concept was expanded by Bloom and Lahey

(1978) with the introduction of the tri-partite model of content, form and use; where language use can be referred to as pragmatics (Geurts & Embrechts, 2010). More specifically Roth and Spekman (1984) provide a framework of pragmatics. This introduces the following concepts as elements of pragmatics; communicative intentions, context, organisation of discourse and presupposition. In the 1980s it emerged that there was a series of different perspectives that influenced the theory and models of pragmatics including psychology, sociology, anthropology and linguistics (McTear, 1985). It was believed that developmental pragmatics lacked a coherent theoretical framework.

The next decade saw the introduction of the term 'social' when describing communication. Semin and Fielder (1992) developed the concept of social cognition as the interface between language, social interaction and cognition. Bishop et al. (2000) refer to social cognition as being able to understand not only what is being said by a partner but also the speaker's communication intent. This social psychological approach demonstrated that social communication is made up of the amalgamation of various linguistic elements which culminate in successful social communication when integrated into real social situations and environments. The terms 'social' and 'pragmatic' were combined to produce a social-pragmatic approach, (Tomasello, 1992 cited in Bono et al., 2004). This was the introduction of the concept that language development is dependent upon qualities of the social world and develops further the theory of Bloom and Lahey (1978). The 'social cognition' concept produced by Semin and Fielder (1992) was reinforced by Ramberg et al. (1996) when they describe pragmatics as an interface between social, linguistic and cognitive aspects.

In 1995, Sperber and Wilson use Relevance theory to explain how a listener interprets a speaker's meaning on the basis of contextual factors. Relevance theory is based on the assumption that linguistics does not provide the intended meaning and is insufficient for the comprehension of utterances. Utterances can have many possible interpretations and comprehension is driven by the search for relevance: the hearer uses relevant contextual information when interpreting the meaning.

The non-verbal aspects of communication have been a thread throughout the literature with Morris (1938) and Kelly & Barr (1999) linking them to pragmatics. Bara et al. (1999:509) critically reviewed the theories of pragmatics and refer to non-verbal elements as

"communication in context" and they concluded that there is no single theory that methodically covers the emergence of pragmatic ability.

The idea that various skills overlap in communication is emphasised by Richardson and Klecan-Aker, (2000) when they detail five components to language; pragmatics being one of these components. This overlapping, interfacing and merging of skills is a recurring theme in many models (Martin & McDonald, 2003; Ramberg et al., 1996 and Bloom & Lahey, 1978). Ninio and Snow (1996) cited in Bishop et al. (2000) explain that pragmatic ability comprises of several components; some of which are linguistic and others social or interactive.

The specific term 'social communication' did not enter into any of the models identified in the literature until Olswang et al. (2001). The use of the term 'social communication' was used by them to refer to the overlapping of three competencies: social cognition, processing and language. These are very similar to the three interfacing aspects described by Ramberg et al. (1996) when they describe pragmatic competence.

In 2003 the proposition that the traditional components of communication needed a pragmatic dimension was posed by Martin and McDonald. They believe that this provides broader inferred meaning into their model and emphasises the importance of social context. This builds on the concepts already outlined by Kelly and Barr (1999) and Bara et al. (1999).

Adams (2005) follows Olswang et al. (2001) in specifically using the term 'social communication'. The concept 'synergistic emergence' is adopted rather than the previously identified terms 'interface' or 'overlap'. Four elements are specified: social interaction, social cognition, pragmatics and language processing. These four elements are similar to Olswang et al.'s (2001) three competencies as described earlier. In a previous paper Adams (2002) described language pragmatics as an interface between cognitive, social and linguistic development. These are reflective of Ramberg et al. (1996).

Fielder (2007) edited the book titled *"Social Communication"*; once again this refers to merging of different aspects of communication from a variety of theories to provide an

extended model of social communication: semantics, social relations of verbal and non-verbal communication, syntactic language and pragmatic language.

The term 'social communication' is used specifically by Olswang et al. (2001); Adams (2005) and Fielder (2007) but in 2010 Tadic et al. chose the terms 'communication' and 'social interaction' which combined to create the concept 'social-communicative functioning'. They believe that this concept is the merging of structural language skills and pragmatic language skills. If the term 'socio-communicative' is interpreted to mean social communication, it would seem pragmatics is to be taken as a contribution towards social communication as opposed to it being synonymous.

The development of a comprehensive model that places pragmatics and social communication in the context of speech, language and communication is challenged by the fact that there is no normal developmental framework for the development of these skills Bara et al. (1999); Adams (2002).

Conclusions and synthesis regarding the theme 'models'

The models and frameworks identified in the literature show many similarities. It appears that they develop and build on from one to another. As terminology has evolved so have the models. There is a change over time that is mirrored with a change in terminology. The models to explain both pragmatics and social communication suggest that there is an overlapping of skills that are intertwined to produce an appropriate communication exchange. The most recent models indicate that understanding context is an important factor in successful communication. This links with Relevance theory (Sperber & Wilson, 1995) which provides a way of viewing language comprehension in terms of inferencing, integrating contextual information and pragmatic demands.

It is very difficult to accurately identify how social communication fits within the broader models of language and communication because the interchangeable use of terminology mentioned in section 4.3.1.1 is also occurring within the models, frameworks and theories. Perhaps what started off as a simple model that contained the two key elements, semantics and pragmatics (Morris, 1938) developed into three aspects, content, form and use (Bloom & Lahey, 1978) and then further evolved into a more complex model of inter-related aspects. This more recent model could be described as having several components that

mesh, synergise, interface or overlap to produce successful communication. How these aspects are labelled varies according to time, author, professional knowledge, experience and interpretation.

4.3.4 Measures and assessment

It is important to define what is meant by assessment in this context so as to differentiate it from outcome measurement which will be discussed later in section 4.3.6. Sometimes the terms assessments, tools and outcome measures are *"used interchangeably and sometimes more specifically. In essence, most are used to guide intervention"* (Communication Matters, 2012:3). Formal and informal assessments are both used to aid professionals in identifying areas of strength and difficulty in an individual in order to inform a treatment plan. Formal assessments are based on theory, follow prescriptive testing procedures and are psychometrically robust but may have limited scope. Formal assessments can be useful for identifying abilities and difficulties in specific areas. They allow results to be compared and they can monitor change over time. Data from formal assessments can be aggregated. Informal assessments refer to less structured procedures that have not been scientifically tested. Professionals use their experience to collect data informally to probe specific areas of strength or difficulty. Outcome measures are also tools used to assess but they are used to assess change in a person over time. They help professionals to judge the impact of interventions/services or treatments.

> *Formal and informal assessments help the professional to identify the programme of care, intervention and its course and objectives. These should be informed and agreed with the person, their family and carers. However, the outcome of the intervention is likely to be broader ranging.*

> (Communication Matters, 2012:6)

Assessment and measurement of communication skills may be different in the clinical setting compared to when measuring for research purposes. Often clinical assessments are constrained by time and resources. The following section aims to draw together the key factors relating to assessment within the literature. There was more information in the literature relating to assessment of pragmatic language than the assessment of social communication; however if we accept that the terms can be used synonymously then the information identified regarding assessment in both should be discussed.

Ramberg et al. (1996) emphasise that assessment measures must be an integral part of any pragmatic framework in order to understand how aspects of the child's communicative behaviours relate to one another. However, it is clearly documented that the assessment of pragmatics is difficult. Volden et al. (2009) cite (Bishop, 1998; Bishop & Baird, 2001; Adams, 2002) to emphasise the difficulty in measuring pragmatic skill. As pragmatics refers to context it is difficult to isolate from performance measured by a single standardised test and relate to a person's overall communication competence. This is reinforced in the following two quotes:

A developmental approach to assessment has remained problematic due to the complex interaction of social, linguistic, cognitive and cultural influences.

(Adams, 2002:973)

It is not easy to measure pragmatic behaviour since, by their very nature, they are a set of contextually based, spontaneously generated features framed around the individual's need to communicate ideas.

(Adams & Lloyd, 2007: 227)

Volkmar et al. (2004) refer to the period between late 1990's and the early twenty first century as the development of tools that looked beyond autism and incorporated 'social' elements such as social communication and social responsiveness. The tools developed include the CCC (Bishop, 1998) and The Social Responsiveness Scale (SRS) (Constantino, 2002). The CCC features as a measure of intervention in several papers on social communication referred to above, for example, Donno et al. (2010); Gilmour et al. (2004) and Tadic et al. (2010). It was developed by Bishop (1998) to assess aspects of communicative impairment that were not adequately evaluated by contemporary standardised language tests. These aspects are described as predominately pragmatic abnormalities seen in social communication difficulties. The checklist incorporates items covering social relationships and restricted interests in order to identify the relationship between pragmatic difficulties. Botting (2004) in her exploration of the use of the CCC in eleven year old children with communication impairments concludes that her study of 161 children adds weight to the use of the CCC pragmatic scale scores and to its usefulness in a clinical setting. It appears to be able to identify group differences and should be used clinically as a descriptive tool in conjunction with other measures.

The Social Communication Questionnaire (Rutter, Bailey & Lord, 2003) is in the work of Oosterling, Rommelse, de Jonge, van der Gaag, Swinkles, Roos, Visser and Buitelaar (2010) and Dahlberg et al. (2007). Oosterling et al. (2010) refer to it being used as a screening tool for ASD which emphasises the link between ASD and social communication. Adams (2002) refers to The Pragmatic Protocol (Prutting & Kirchner, 1987) as one of the most influential works in language pragmatic assessment but that the Children's Communication Checklist (Bishop, 1998) has rapidly become the instrument of choice for the identification of pragmatic language impairment.

Geurts and Embrechts (2008) analysed the differing language profiles of children diagnosed with ASD, SLI and ADHD. Their study shows that the CCC 2 (Bishop, 2003) the successor of the CCC (Bishop, 1998) is a valid measure to distinguish between these developmental disorders. Their study also adds to the literature in which parents report that the communication pattern of children with ASD changes over time. This emphasises the importance of evaluating the communication abilities of children regularly to inform intervention. Furthermore they believe that pragmatic ability is probably affected by structural language skills, impulsivity and autistic behaviour. Therefore, focusing on pragmatics without taking into consideration other language and cognitive skills will not provide the complete picture. Regular multi-disciplinary assessment and evaluations of the communication profile of a child are necessary in order to design adequate treatment.

Geurts and Embrechts (2009) aimed to determine whether children's language patterns on pragmatics obtained via a parental questionnaire (CCC-2) are commensurate with findings when the children are directly tested using Nijmegaen Pragmatics Test. The results indicate that both methods of assessment identified pragmatic difficulties in pre-school children with language impairment. However, they highlight that, as different informants contribute to assessments from observations in different contexts, correlation between informants will be low to moderate when studying pragmatics. They conclude that whenever possible it is important to combine information regarding pragmatics from several informants.

Adams (2002) in her review of assessment of language pragmatics refers to two major influences on pragmatic assessment that have emerged since the 1980s; these are described as the linguistic and the social/cognitive. She comments that earlier theorists concentrated

on linguistic aspects, speech act theory, conversation analysis and how speakers convey intended meanings. She refers to Wetherby and Prizant (1992) who stated that assessment must take into account the fact that a child with autism may acquire communicative intent in a different order than the usual sequence. This is because communication is underpinned by social and cognitive factors. Adams (2002) divided assessments into four categories; published tests of language pragmatics, published checklists or profiles, coding systems of natural interactions and assessment of the comprehension of language pragmatics. From comparing the different assessments available within these four categories Adams draws conclusions regarding the assessment process with regard to pragmatic language.

> *In practice there are therefore no really satisfactory single tests of language pragmatics which cover all the aspects one would wish to assess with an individual child. Tests will always need to be supplemented by observations and elicitations procedures.*
>
> (Adams, 2002:976)

Adams (2002) believes that because pragmatics is a set of human behaviours that are dependent upon context; the possibility that these behaviours will be reproduced in formal testing conditions is unlikely. Using formal assessments in order to test language pragmatics is unlikely to be sufficient to reveal a comprehensive clinical picture that is accurate. Adams also refers to various coding systems as a way of assessing pragmatics. These are assessments through observations in naturalistic settings often focusing on speech acts such as, requests, commands, questions, challenges, denial, negation, statements and greetings. She emphasises that these are time consuming and this has an impact on being able to use them in the clinical setting. Adams (2002:980) believes that *"The principles of selecting an appropriate method for assessment have changed little over the years"* and concludes that practitioners now have access to a tool-kit in language pragmatic assessments. This tool-kit includes five key areas: a developmentally arranged list of emergence and types of communicative intent, a comprehensive checklist of pragmatic behaviours, the Children's Communication Checklist (CCC-2), assessment of pragmatic understanding and specific detailed observation-based analysis. However, she outlines the limitations:

The persistent paradox of assessing language pragmatics is that some aspects simply have as much variation as individual personalities and styles of interaction.

(Adams 2002:984)

In practice the assessment of pragmatics is far from being so neat and in reality we have only just begun to understand what can and cannot be achieved. Lack of precision about comparative developmental norms remains an overriding problem.... in addition to cultural, cognitive and social influences.

(Adams 2002:984)

Olswang et al. (2006) described a coding system that they designed to capture behaviours while a child is communicating in the setting of the classroom. The system they describe is sensitive to occurrence and duration. Their 2006 paper demonstrates the reliability of their coding taxonomy for examining social communication performance in the classroom. However, this is when social communication is measured by six behavioural dimensions; hostile/coercive, prosocial/engaged, assertive, adult seeking and irrelevant. As outlined earlier in the various definitions of social communication found in this literature search these six behavioural dimensions do not encompass all that is implied or assumed by the term 'social communication'. Therefore, to measure social communication by these dimensions is limited. However, it does identify that measuring an aspect of social communication by coding and observing occurrence and duration is a useful tool. In addition to support this Olswang et al. (2006:1061) also indicate that *"There are a number of recording devices that are available that allow the examination of the complexities of social communication interaction"*. Four years later, in 2010, Olswang et al. emphasise that standardised tests do not capture the nature of the difficulties and that teacher rating systems only provide a global view of performance. Perhaps a combination of structured, coded observations in a variety of settings and the completion of checklists by different informants will provide a specific and global assessment of skills. Jahromi et al. (2009), in their investigation of the effects of Methylphenidate on social communication, combine observation and coding of what they measure as social communication skills, joint attention initiation, joint attention responding and requesting behaviour.

Keen et al. (2007) investigated the effects of a social-pragmatic intervention and measure areas of symbolic behaviour. They state that this is very parent driven and therefore is subjective as parents can detect the most subtle differences. Adams and Lloyd (2007) refer to assessments tools in their intervention study. They use three assessments: Conversation

Assessment Task (CAT), Assessment of Comprehension and Expression (ACE) and The Clinical Evaluation of Language Fundamentals (CELF).

Cummings (2010:16) writes about the common misconceptions regarding pragmatic disorders. She states that *"All is not well in the assessment and treatment of pragmatic disorders"*. She states that there are four broad misconceptions; the idea that assessment of non-verbal skills tells us about pragmatic skills; the tendency to attribute communicative intentions to behaviours where no such intention exists, for example, head injury and swearing; a tendency to miss the pragmatic point of an exchange; the distortion of the notion of context. She concludes that these four misconceptions mean that there needs to be a critical approach to the assessment and treatment of pragmatic disorders.

Conclusions and synthesis regarding the theme 'assessment'

The literature supports the notion that assessing social communication or pragmatics is a complex process. Due to the complexity and nature of this aspect of communication many factors impact on the ability to measure a set of skills that are so reliant on context. No single measure is deemed adequate to analyse the realm of skill versus deficit that an individual may experience when communicating in different settings. Professional judgement is necessary in order to select appropriate assessment tools to analyse communication in general terms; however a more specific 'tool-box' of assessment materials is essential to adequately profile social communication and/or pragmatics. This tool-box should include the following tools; published tests of pragmatics, published checklists (for example, CCC-2), formal language assessments (for example, ACE, CELF), coding systems, observation, elicitation, recording and filming. By using a combination of these tools a clinician can develop a profile of an individual's strengths and difficulties within the area of social communication, and intervention approaches to address these deficits can be planned and subsequently implemented. It is of paramount importance that data regarding social communication is collected from a number of sources, in a variety of settings over an appropriate period to enable all subtle and nuance based variations to be identified.

4.3.5 Interventions

Intervention to remediate any aspect of communication is reliant upon thorough assessment. As previously discussed defining social communication is challenging and assessment measures are variable. This section intends to synthesise the intervention methods identified in the articles found relating to both social communication and pragmatics.

4.3.5.1 Interventions specific to social communication

Freeman et al. (2002) believe that regardless of any diagnostic category many adults and children with social communication learning disability need intervention. Olswang et al. (2001), report that Speech and Language Pathologists feel pressure to provide clinical services to youngsters with social communication problems.   Jones and Schwartz (2007:432) state that "*deficits in social communication skills continue to be among the most pervasive and difficult to remediate*". This difficulty may be due to the lack of clarity regarding a definition of social communication.   This has an impact upon accurate assessment measures and subsequently influences intervention and remediation. Remediation requires firm foundations to enable the development of interventions. Being clear what is the skill or skills that require remediation is paramount to success.

Aldred, Green and Adams (2004) investigated the effectiveness of a social communication intervention for children with autism using a randomised control trial. They conclude that a randomised treatment trial design is acceptable to patients and that the pilot study suggests significant treatment benefits from following a dyadic social communication treatment compared to routine care. However, they believe that this pilot study needs replicating using a larger sample; this larger study was completed in 2012 and it is referred to in this literature synthesis in section 4.3.5.3.   Despite referring to a new social communication intervention they do not describe what is meant by the term.   Their assessment measures drew on different aspects of outcomes including autistic behaviours, interaction between parent and child and social communication.   It used multiple approaches to data collection including what they believe to be the most widely accepted standardised measures; however, it is not clear how they measure social communication. In the appendix of this paper they provide a description of the social communication intervention, however, this does not elucidate what social communication is.

Adams (2005) describes and rationalises a social communication intervention for school age children. She describes how children of school-age with social communication difficulties form an expanding population who need intervention. As stated earlier this was also identified by Olswang et al. in 2001. Adams believes that the importance of intervention in the school years cannot be underestimated. She comments that there is little evidence to support the choice of appropriate interventions for school-aged children. This paper develops a framework, as discussed in a previous section (4.3.3), which leads to the development of an intervention. She believes that intervention must extend beyond the concept of behaviourist social skills training and strengthen the underlying language processing which supports social communication development.

Whalen et al. (2006) write about the effects of joint attention training for young children with autism. The training involves teaching the child to respond appropriately and also to initiate joint attention bid. They believe that teaching young children with autism to engage in joint attention may lead to increases in other non-targeted social communication. They conclude that teaching joint attention skills increases social motivation which influences the development of other social communication skills. However, they do not specify what these other skills are.

Mancil et al. (2009) investigated the effects of a modified milieu therapy on the social communicative behaviours of young children with autism spectrum disorders. Milieu therapy is a behavioural intervention that focuses on teaching children new communication and behavioural skills in their natural environment. They conclude that functional communication training (FCT) and milieu therapy reduce aberrant behaviours, increase communication and promotes generalisation to a variety of settings. However, these conclusions are based on a small sample size, reducing validity. The subjects were young children and as such it cannot be certain that the findings can be applied to older children. This research cannot be taken as an indication that milieu therapy is an intervention for the remediation of social communication because Mancil et al. (2009) only refer to the term social communication in the title of their paper and in the section for future research. At no point do they define what they mean by social communication and throughout the paper they refer only to communication. Modified milieu therapy can therefore be considered a behavioural intervention to teach communication skills, not social communication *per se*.

Devlin (2009) describes an intervention, "The Rules Grid" that was developed by an EP as an instrument used by the EP service in a specific locality. It is a visual approach that aims to make the complexity of social situations manageable and to assist with appropriate social communication, understanding and interaction. The article concludes that the Rules Grid could be a useful addition to the range of other tools used by EPs to support children who have social communication and interaction difficulties. However, Devlin draws these conclusions from only one subject. This is not a research based evaluation of the "Rules Grid" but a description of how it could be used.

Jones and Schwartz (2009) examined communication patterns between high functioning children with autism and their families and typically developing children and their families within traditional dinner time conversations. This was not investigating the impact of a specific therapeutic intervention; although it did generate some discussion points regarding intervention. They believe that high level social communication skills must be taught directly at school and at home yet they do not specify what social communication means for this purpose. Their findings suggest that more work is required in teaching complex social communication behaviours to individuals with high functioning autism. They go on to emphasise that the most effective way to address such complex skills at various ages is by creating multi-dimensional solutions based on a number of assessment techniques, for example, observations of family videos in addition to standardised tools. This supports my earlier comment, in 4.3.4, that a combination of assessment modes including coded observations and checklists will provide the most thorough assessment on which to base any intervention.

Jahromi et al. (2009) examined the effects of Methylphenidate on social communication and self-regulation in children with pervasive developmental disorders and hyperactivity. In this instance Methylphenidate can be considered an intervention for improving social communication skills. This was a detailed piece of research using a sample of 72 participants via appropriate selection criteria. They measure improvement in social communication by observations and dual coding from video tapes. Conclusions suggest a possible positive effect of psycho-stimulant medication on specific aspects of social communication: joint initiation, response to bids and spontaneous requesting.

Wainer and Ingersoll (2011) conducted a review of the literature regarding the use of computer technology for teaching social communication to individuals with ASD. Despite using the term social communication in the title of their literature search they never define it, nor did they use it as a search term. At points during their review they separate social communication into social **and** communication skills. They identify fourteen studies and included articles in their review that they describe as targeting social communication. They focused specifically on verbal language, emotional recognition and social skills and they conclude that multi-media programmes have potential in teaching important skills within ASD.

Winner and Crooke (2011) outlined their ideas regarding social communication strategies for adolescents with autism. Although they refer to social communication strategies they also use a host of other terms, for example, social learning challenges, social learning deficits, social thinking and social skills. They believe that the mechanisms of social communication during adolescence are finely tuned and that many adolescents figure out intuitively how to get by. They describe a theory connected to their concept of "social thinking" which focuses on the importance of blending in with peers by producing more nuanced social responses. They take the view that social skills are "dynamic and situational" which leads them to conclude that they are not skills that can be taught and generalised but that they evolve from perceptions and thinking. This belief impacts on intervention methods as does their concept that a decision to use a specific social skill is based on social decision making and not on memorising specific social rules. Winner and Crooke specify that it is important to give individuals scaffolding about social situations to aid their social thinking rather than to teach the social rule. Intervention needs to be based on the principle that individuals with AS exhibit extremely diverse social learning traits or social mind profiles and they should receive unique treatments. They consider that social skills are the behavioural output of social minds and as such it is a clinician's responsibility to help students to build stronger social minds as the first step in treatment.

4.3.5.2 Interventions specific to pragmatics

In 2000, Richardson and Klecan-Aker indicated that there was very little data in the literature that specifically focuses on the effects of teaching pragmatic language skills. Adams et al. (2006:42) state that the remediation of pragmatic problems is a significant

element of the role of professionals that are working with children with communication difficulties. *"A significant proportion of services in educational speech and language therapy are directed to the amelioration of pragmatic difficulties".* They believe that SALTs recognise that they have a part to play with children with pragmatic language impairment via both a direct and indirect approach. They are responsible for the remediation of impairments and the support for learning and personal development via adaptation of the context and environment. In their study, Adams et al. cite several studies from expert practitioners that outline practical guidelines for interventions with individuals with PLI. Some of these experts refer to pragmatic interventions (Paul, 1992; Anderson-Wood & Smith, 1997; Leinonen et al., 2000) some to social language (Rinaldi, 2001; Gray, 1998) others to semantic pragmatic (Frith & Venkatesh, 1999) and others describe interventions for specific language impairment (Brinton & Fujiki, 1995; Naremore et al., 2001).

Since children within the PLI population are known to show heterogeneous pragmatic profiles, it follows that individual programmes with specific aims will aspire to different directions of change in conversational indices.

(Adams et al., 2006:55)

It is not necessary to choose between direct and indirect models of intervention and they should be seen as complementary and applied flexibly to suit individual needs.

(Adams et al., 2006:61)

Adams et al. (2006) emphasised that occasional reviews by a SALT with programmes carried out by support staff does not meet the needs of children with PLI but that intensive SALT does. The consultancy model that is frequently adopted by SALT departments in the UK (Law, Lindsay, Pacey, Gascoigne, Radford & Bara, 2002) may not be the appropriate model for this population of children. Adjustments and adaptations of the environment may be necessary to support any direct intervention.

Richardson and Klencan-Aker (2000) investigated whether a specific intervention programme to improve pragmatic language skills, specifically conversation, is effective. This is a very limited study; all the subjects were from one school and the study population was only 20 pupils. The programme was over six weeks and carried out in two classes of 10 pupils. Each session lasted 30 minutes. Three areas of conversation were chosen as

objectives to be taught; receptive identification of emotion, expressive identification of emotions and description of objects. They concluded that there was improvement in all three targeted areas for all 20 subjects. They therefore state that the treatment programme was successful in teaching pragmatic language. They noted, however, that when measuring outcomes there is a phenomenon that occurs with programmes that focus on pragmatic language abilities; often teachers will be targeting the same areas as the intervention and therefore progress is not necessarily a result of the treatment. Also language components are so inter-related that it is possible to identify progress in the areas that are not treated.

> *Pragmatic language remains important in the classroom, and the Speech and Language Pathologist may find teaching these skills a useful tool when they are expected to provide language treatment in the classroom setting.*
>
> (Richardson & Klecan-Aker, 2000:38)

Keen et al. (2007) investigated the effects of a 'social-pragmatic' intervention which focuses on enhancing social communication skills through everyday interactions with the child's primary social partner. The sample size for this study is small using only sixteen subjects and they do not have a control group. Positive changes in communication and symbolic behaviour identified through parent report were not always found in the objective standardised measures. Keen et al discuss this in relation to possible parental bias, the possibility that parents are more sensitive to subtle changes and the small sample size.

Adams and Lloyd (2007) refer to intensive intervention. Their study findings suggest that all six children improved in their conversation skills and some significant changes in language test performance were found. The study suggests that intensive SALT intervention has the potential to produce generalisable gains. They described eight weeks of intervention with three sessions per week from a senior SALT. Each child had individual targets set that were based on assessment information. There was also a component of training which provided environmental strategies to support social communication.

4.3.5.3 Intervention mentioning both social communication and pragmatics

Adams et al. (2006) explore the effects of communication intervention for developmental pragmatic language impairments. The intervention in this study was designed using a framework that emphasises four principal aspects; social interaction, social cognition, language pragmatics and language processing. This is the same framework that is outlined in Adams (2005) in her article titled "*Social Communication intervention for school-age children rationale and description*". This relates to the earlier conclusion that there has been a change in the use of terminology over time and the use of the terms 'social communication' and 'pragmatics' synonymously.

In 2012 two research reports (Adams et al., 2012a & 2012b) were published: one that evaluated the effectiveness of an intensive social communication intervention programme (SCIP) and another that detailed the structure and content of the SCIP manual. Adams et al. (2012a) presented the findings of a randomised control trial of 88 children with what they describe as pragmatic and social communication needs. These 88 children aged between 5 years 11 months and 10 years 8 months old were randomly assigned to the SCIP or to treatment-as-usual. The intervention was made up of 20 sessions of direct intervention from a specialist SALT and trained assistants. The content of the intervention was a structured framework that focused on the remediation of impairments in semantics and high level language skills, pragmatic difficulties and social interaction and social clue interpretation. A manual (Adams et al., 2012b) provided all the intervention activities; each child received an individualised intervention that was derived from the manual. The conclusions and clinical implications of the trial were that it is likely that the intervention provided in the SCIP is effective at improving overall conversational quality in children who have significant pragmatic and social communication needs compared to those accessing treatment-as-usual. There was no evidence of improvement in structural language skills. The findings suggest that there are positive changes in children's communication skills which are perceived as meaningful to those living and working with the children. School age children with pragmatic and social communication difficulties typically receive provision from a SALT in the form of a consultancy model. Provision to support these children in the UK is variable, although liaison between teacher and therapist is often successful and parental contribution to treatment is a positive factor (Adams et al., 2012a).

4.3.5.4 Interventions used with individuals with ASD that link to social communication and pragmatics

Social Stories are a popular intervention with practitioners (Gray, 1998). They are a multi-faceted intervention used to increase the social understanding of individuals with ASD. Reynhout and Carter (2006) conducted a review of 16 empirical research studies on Social Stories. The quality of these studies varied and examination of data suggests that the effects of this intervention strategy are highly variable. Their analysis was confounded by the fact that studies frequently used Social Stories in combination with other interventions. They state that data on maintenance and generalisation was also limited. They conclude that *"Social Stories stand as a promising intervention, being relatively straight forward and efficient to implement with application to a wide range of behaviours"* (Reynhout & Carter, 2006:445).

A later study by Reynhout and Carter (2009) specifically addressed the use of Social Stories by teachers. They surveyed 105 teachers to investigate their perceptions of the efficacy of Social Stories. The results provided insight into the ways this intervention is employed by professionals working within the field. It appeared that there was disparity between the Social Stories written by teachers and the recommended guidelines. The teachers surveyed use Social Stories as an intervention because they find them easy to compile and implement. They believe them to be effective but they perceive that there are difficulties with maintenance and generalisation.

In a further study in 2011 Reynhout and Carter examined 62 studies on the effects of Social Stories. This was a much more rigorous systematic review and the overall results suggested that Social Story intervention was only mildly effective. However, they note that the intervention appeared to be very effective in a limited number of instances and that this may indicate that the intervention may be more efficacious under certain conditions. There was some evidence to suggest a slightly greater efficacy for studies that included participants that did not have ASD. Also outcomes were improved when reinforcement was used in addition to Social Stories. They believe that:

> *Social Stories appear to have only a small clinical effect on behaviour and practitioners should factor this consideration into decisions about appropriate interventions. Social Stories may be attractive to practitioners because they are easy to implement and require very limited resources. Nevertheless, given the*

limited potential for improvements, in many cases time may be better invested in more intensive interventions that are likely to yield more substantial gains.

(Reynhout & Carter, 2011:897)

Ali and Frederickson, (2006) investigated the evidence base for Social Stories. They conclude that Social Story intervention has continued to increase in popularity even though there has been limited empirical evidence to demonstrate its effectiveness; their paper aimed to locate and review the research evidence about the effectiveness of Social Stories. The review demonstrates that there are various limitations but that the studies reviewed in their paper all point towards the positive potential of Social Stories.

Hanley-Hochdorfer et al. (2010) believe that the efficaciousness of Social Stories is questionable and needs further research. They conducted a small scale, limited study of four students to investigate the effectiveness of Social Stories as an intervention to increase verbal initiation. They concluded that although there was evidence to support the use of Social Stories to decrease disruptive behaviour in children with ASD, caution should be taken when considering the use of Social Stories to increase social and communicative behaviour as outcomes are not as promising. They indicated that when Social Stories are used alongside other interventions, effects are more pronounced.

There has been an increasing number of group based programmes that aim to improve social skills for children with ASD (Herbrecht, Poustka, Birkammer, Duketis, Schlitt, Schmotzer & Bolte, 2009; Solomon et al., 2004). The first social skills groups date back 20 years and focus on the improvement of communication and interaction skills and on the facilitation of positive social experiences with peers. Programmes differ considerably in terms of the overall duration, frequency, composition and teaching methods, (Herbrecht et al., 2009). Despite widespread use in clinical practice little evidence on the effectiveness of social skills training programmes is published. Evaluation studies differ greatly.

Herbrecht et al. (2009) carried out a pilot study to evaluate the effectiveness of a specific group based intervention, the Frankfurt Social Skills Training. This aims to improve social and communication skills in individuals with ASD. This small study involved 17 children receiving group based intervention over a period of 11 months. Their findings indicated

that this intervention may be a useful tool for enhancing social skills and that controlled trials are needed to further investigate the effectiveness.

Group intervention is described by Solomon et al. (2004) to be most frequently used in treatment programmes for children with high functioning autism spectrum disorders. The group model allows members to practise skills in a reasonably naturalistic setting. Solomon et al. (2004) conducted an intervention study to investigate the effectiveness of a specific curriculum 'The Social Adjustment Enhancement Curriculum'. This intervention was designed to target three key areas, emotional recognition, theory of mind and group problem solving and was coupled with parent training over the twenty week programme. They conclude from their findings that it is possible to teach facial expression recognition and problem solving to children with high functioning autism in a group format. They raise the important issue of how individual differences in cognitive ability and profile, diagnostic classification and symptom severity, influence response to social skills intervention.

Koenig, White, Pachler, Lau, Lewis, Klin and Scahill's (2010) study adopts a randomised controlled design to evaluate a social skills intervention for children with pervasive developmental disorders. Forty four children were randomly assigned to a treatment or non-treatment group. The treatment consisted of 16 weeks of group intervention designed to teach appropriate social behaviour. The results showed that parents reported a high level of satisfaction with the intervention, however the findings were not significant and therefore further research on a larger scale would need to be completed in order to evaluate its efficacy.

Reichow and Volkmar (2010) presented a best evidence synthesis of interventions to increase social behaviour for those with autism. They synthesised the findings of 66 studies published between 2001 and 2008. Their findings suggest that there is a lot of empirical evidence supporting many different treatments for social deficits of individuals with autism. Using specific criteria for evidence based practice, social skills groups accumulated the evidence necessary to warrant the classification of 'established' evidence based practice. Modelling accumulated the evidence necessary to warrant the classification of 'promising' evidence based practice.

Rubin and Laurent (2004) believe that a skills based model of intervention with individuals with AS that focuses on enhancing individual skills does not ensure success across social partners or allow for generalisation. However the SCERTS® model of intervention focuses on building competence in Social Communication, Emotional Regulation and Transactional Support (Prizant, Wetherby, Rubin & Laurent, 2003). This model provides a framework to guide professionals and parents in making the best decisions in prioritising goals and objectives to support individuals with autism. It is described by Rubin and Laurent (2004) as a comprehensive educational approach that includes support not only for the individual but also for the social partner, thus aiding generalisation. The child-centred approach provides strategies to support a child's development and achievements within a meaningful context.

Conclusions and synthesis regarding the theme 'intervention'

It would seem that focusing therapeutic intervention on a specific aspect of communication can subsequently influence the development of social communication, for example, language processing (Adams, 2005), joint attention (Mancil et al., 2009) and the social mind (Winner & Crooke, 2011). The majority of interventions identified cannot be promoted as models to improve social communication *per se* as often the article is unclear regarding the meaning of this term. The evidence base for intervention to remediate social communication and pragmatic deficits in individuals with or without autism is variable. There are many factors that impact on successful intervention including, environment, context, nature of intervention and generalisation or transference. Adams (2005), Winner and Crooke (2011) and Jones and Schwartz (2009) appear to agree that individual social communication skills should not be taught in isolation in the traditional sense but that other factors must be given consideration. These factors are solution based support, dynamic and situational understanding, skills evolving from perceptions and thoughts, scaffolding of social situations and consideration of the social mind. All factors need to be underpinned by the reality that social communication happens in real time, with real people, in real situations and not as a set of isolated rules. Social communication is subtle, blends and varies across cultural boundaries and evolves and develops with age and experience.

4.3.6 Outcomes

In any clinical or educational environment a positive outcome is a measure of success. Whether it be a teaching method, a new strategy, an intervention programme or medication, it is important to evaluate its effectiveness and to measure outcomes. The educational setting is driven by pupil outcome measures and it is important to collate a balanced set of qualitative and quantitative data as evidence of progress. This is specified by the Office for Standards in Education (Ofsted) in the Common Inspection Framework for further education and skills which is devised by Her Majesty's Chief Inspector (HMCI) in line with the Education and Inspections Act 2006 and it informs all of Ofsted's further education and skills inspections. This document refers to the importance of outcomes in the educational setting,

> *The inspection of outcomes is important because persistent patterns of low achievement affect learners' life chances, and have a deep and damaging impact on families and communities.*
> (Common Inspection Framework 2012 – consultation document September 2011, No. 110070:8)

Within health service provision outcome measures were advocated as long ago as the late 1970s but only achieved prominence in the late 1990s when there were increasing resource pressures (Enderby & John, 1999). Enderby and John (1999) believe that outcome measures help to bridge the gap between research and clinical provision, increase a greater awareness of what is achieved, and encourage reflective practice. To enable accurate outcome measures there needs to be clarity on what is to be measured. The challenge for anyone living or working with individuals described as having social communication deficits is how to support them in improving their social communication skills, to enable them to function appropriately (or acceptably) in a variety of settings, situations and stages in their lives. As previously discussed social communication is a poorly defined, complex, subtle, and variable skill. It is influenced by many external and internal factors such as expectations, prejudice, culture, personality, linguistic ability and cognition. This makes it a difficult set of skills to identify via assessment, remediate via intervention and measure for outcome purposes. Measuring outcomes is important to demonstrate progress and to justify the need for adequate resources.

> *SALT services, in line with other healthcare provision, must increasingly satisfy the requirements of evidence-based practice in order to justify present or increased resources to support children with PLI and communication difficulties in school.*
>
> (Adams & Lloyd, 2007:227)

Olswang et al. (2001) reinforce this at several points in their article referring to outcome measures for school-age children with social communication problems. Their following statements emphasise the complexity of the situation.

> *The treatments are sophisticated, because the problems are complex. Documenting change that results from these treatments is a challenge, due in part to the complexity of the problem.*
>
> (Olswang et al., 2001:51)

> *Measures must also be reasonable for clinicians to administer. This is a tall order, particularly as we consider the complexity of social-communication in school aged children.*
>
> (Olswang et al., 2001:53)

> *The challenge for clinicians is knowing which combination of behaviours in this complex compound are the most appropriate outcome measures for a specific child.*
>
> (Olswang et al., 2001:56)

This paper provides valuable information regarding the complexity of identifying outcome measures for social communication. Olswang et al. (2001) emphasise the importance of being specific in what is to be measured, how and where. They use four clinically useful tasks to collate samples from which to analyse social communication; hypothetical tasks, narrative tasks, analogue tasks and direct observation. They view these tasks on a continuum. They believe that the best information is likely to be gained from a variety of tasks, administered repeatedly and periodically. In their view clinicians must utilise both qualitative (descriptions from notes) and quantitative data (how often a behaviour occurred) in order to obtain a comprehensive and theoretical understanding of social communication. Social communication varies depending on context and this impacts on measuring outcomes.

Richardson and Klecan-Aker (2000) reported that there is very little data on the effects of teaching pragmatic skills. They believe that clinicians must demonstrate the effectiveness of their treatment programmes. Law, Garret and Nye (2003) completed a systematic review of the evidence revealing that there is very limited high-quality research to support the effectiveness of developmental communication intervention. Keen, Rodger, Doussin, and Braithewaite (2007) were still saying that there is no conclusive evidence that the social-pragmatic approach is effective; there is variability regarding the success of intervention and there are few empirical studies available. There is some contrast with the findings by Adams et al. (2006) where they refer to studies by Brinton and Fujiki (1995); Wilcox and Mogford-Bevan (1995); Adams (2001) and Letts & Reid (1994). These studies indicate that the remediation of pragmatics will be successful but stress that the variation and nature of the effects are still unclear.

Adams et al. (2006) in their intervention study aim to identify if there is a signal that targeted SALT brings about change. The study is limited in design and methodology and has a very small number of subjects. Hence the authors use the term 'signal' of change rather than definite change. This is therefore not a good evidence base which is acknowledged by the researchers. It only sets out to provide a signal of positive change in communication behaviours of children with PLI when they are given intensive, specialist intervention (three times per week for one hour for eight weeks). Out of a very small sample of six children some showed clear change signals but others were less convincing. The authors explain this to be a reflection of the complexity and breadth of the profiles of the children. They go on to comment that there is little systematic evidence regarding the benefits of SALT for children with pragmatic difficulties. There is limited evidence that changes in pragmatic behaviours are a result of specific intervention. They believe that there is little existing high quality evidence that would stand rigorous methodological scrutiny to support the concept that pragmatic ability can be improved with intervention.

A crucial consideration in the evaluation of an individual's progress is his or her ability to generalise cognitive potential into real-life situations. Often standardised instruments testing cognitive and language functioning are used to measure outcomes but these can differ from an individual's ability to use these skills in everyday settings. Interacting with others and developing relationships are necessary in order to navigate the social world, (Klin, Saulnier, Sparrow, Cicchetti, Volkmar & Lord, 2007).

Beadle-Brown, Murphy, Wing, Gould, Shah, and Holmes (2002) and Beadle-Brown, Murphy and Wing (2005) looked at the long term outcome for people with autism with particular focus on social impairment. They believe that people who are socially impaired in childhood are likely to continue to have difficulty making friends and interact with others on any level. Their study looks at the changes in social impairment for a group of adolescents and young adults in a follow-up from a previous study in the 1970s, the Camberwell study. They conclude that if people with social impairments are to have positive outcomes then it is necessary for educational services to focus on the specific issue of impairments in social interaction. The majority of children reassessed as adults in their study in 2002 did not receive any special intervention. It is possible to speculate that with some form of appropriate intervention the children may have shown more changes in social skills. Beadle-Brown et al. (2005) surmise that a similar study conducted in the present day may show more improvements over time because of an increased knowledge of autism and an increase in specific interventions and educational models. They suggest that from their research a significant question still remains unanswered; can social impairment be lessened with training in the right environment and at the right time?

Gresham et al. (2001) interpreted the outcomes of social skills training with individuals described as having significant deficits in cognitive, academic and emotional/behavioural functioning. Although this is not referring to social communication skills but to social competency there appears to be obvious overlap. Socially important outcomes make a difference in terms of an individual's ability to function, adapt to the environment and receive age appropriate acceptance. Social skills are the behaviours that an individual uses to perform a social task, for example, starting a conversation or giving a compliment. Social competence is an evaluative term based on judgements, for example how successful the individual is deemed to have performed during a social task. Gresham et al.'s review indicates that there are several reasons for the weak effect of social skills training; social skills training for this population should be more frequent and intense than has occurred in most of the studies; social skills training must be specifically linked to the individuals social skill deficit; more consideration needs to be given to generalisation and maintenance of social skills.

It is widely accepted that positive long-term outcomes for children and adolescents with Asperger syndrome (AS) and children and adolescents with high functioning autism are correlated with the achievement of social competence.

<div align="right">(Rubin & Laurent, 2004:298).</div>

4.4   Summary of the literature synthesis

By coding the literature and allowing themes to emerge this synthesis has placed social communication into context within the educational and clinical settings.   The data extracted from these themes has highlighted many pertinent issues.   It has demonstrated that there is interchangeable use of terminology and has identified many underlying causes of social communication and pragmatics.   The literature suggests that although there are a number of different underlying causes, the aetiology is not as important as accurately identifying the profile of social communication deficits.   Regardless of the diagnostic category individuals require intervention.   The synthesis of the literature has identified models and frameworks that show many similarities.   These models have developed and evolved and have built on from one to another demonstrating a change over time that mirrored a change in terminology.   The literature supports the concept that assessing social communication or pragmatics is a complex process but that by using a combination of assessment tools a clinician can develop the most accurate profile.   By focusing therapeutic intervention on specific aspects of communication, improvement in social communication and pragmatics can happen.   However the evidence base for intervention to remediate social communication and pragmatic deficits in individuals with or without autism is limited.   Measuring outcomes is important to demonstrate progress and to justify the need for adequate resources.   Several themes have emerged from the literature and these will contribute to a thematic framework for analysis of data collected by other methods.   The themes from the literature emerged over time, before, during and after the data that was collected from the pilot study, survey, focus groups and semi-structured interviews (Figure 5).   The next four chapters will outline the findings from all other data sets.

5 Chapter Five – Pilot Study Findings and Interpretation

5.1 Introduction

This pilot study was a small scale project that aimed to trial a focus group; the objective was to see if SALTs could define social communication (for procedure, see 3.7.2). The participants are described in 3.7.5. The focus group data was transcribed verbatim and analysed (see section 3.7.2). This data analysis followed Attride-Stirling's (2001) six step approach on analysing qualitative data to generate thematic networks. The process of familiarisation enabled exploration of the text and a reduction or breakdown of the material, an important strand of qualitative research (Lee & Fielding, 1996). Reducing the data involved converting it into usable and meaningful chunks. This approach provided a structured framework to code the data, establishing basic themes, organising themes and the broader global themes according to the following procedures.

5.2 Findings

Three global themes have emerged from the analysis. The three global themes will be discussed separately describing the organising themes and basic themes that allowed the global theme to emerge. Each basic theme will be substantiated with direct quotes from the focus group. Figure 6 is a visual representation and Table 10 is a tabular representation of the generated themes.

Figure 6 – A visual representation of themes that emerged from the pilot study focus group

GLOBAL THEMES
ORGANISING THEMES
BASIC THEMES

Therapists perceive social communication to mean the same

Social communication is dependent on other things

Defining social communication is challenging

Defining is complex

Social communication is a vague area

Therapists assume they mean the same thing

Assumptions are made

1
Defining social communication is complicated

There is ambiguity

Social communication is a broad concept

Social communication is influenced by many factors

Commonality and diversity in defining social communication amongst Speech and Language Therapists

Preferred terminology

Preference of terminology

3
Terminology

2
A definition of social communication

Social communication has to consider factors

Adapting

Functional

Social norms

Context

How we use language

Use of terminology

Other professionals

Social communication is an umbrella term

Interaction skills

Conversation style

To mean the same thing

Terminology used

Knowledge of world

Appropriate style

106

Table 10 – Themes that emerged from the pilot study focus group

Issues discussed	Basic themes	Organising themes	Global themes
Sliding scale Widest sense Wide ranging Dependent upon need General terms Sub-headings merge Wording Things like Therapists assume Presume Complexity Not straight forward	Therapists assume mean same thing Therapists perceive SC to mean same thing Defining SC is complex SC is dependent on certain things SC is broad SC is vague SC is influenced	Assumptions are made Defining is challenging There is ambiguity	1 Defining social communication is complicated
Use of language Functional communication Contextual information Non-verbal Repairing conversations Body language Processing information Eye contact Proximity Turn taking Topic maintenance Making inferences Emotions Sarcasm	Adapting Functional Social norms Context How we use language Conversational skills Appropriate style Knowledge of the world Interaction skills	SC has to consider certain factors SC is an umbrella term	2 A definition of social communication
Pragmatics as a term Use of language as a term Perception of semantic-pragmatic Similarity Do SALT prefer one	To mean the same thing Other professionals Terminology used Preferred terminology	Use of Preference for	3 Terminology

5.2.1   Global Theme 1: Defining social communication is complicated

Figure 7 - Visual representation of global theme 1: defining social communication is complicated

Codes:

10. wide

11. dependent

12. vague

13. assumption

14 complexity

Issues discussed:

- sliding scale
- widest sense
- wide ranging
- dependent on need
- dependent on age
- general terms

- sub-headings merge
- wording
- things like
- therapists assume
- therapists presume
- complex to define
- not straightforward
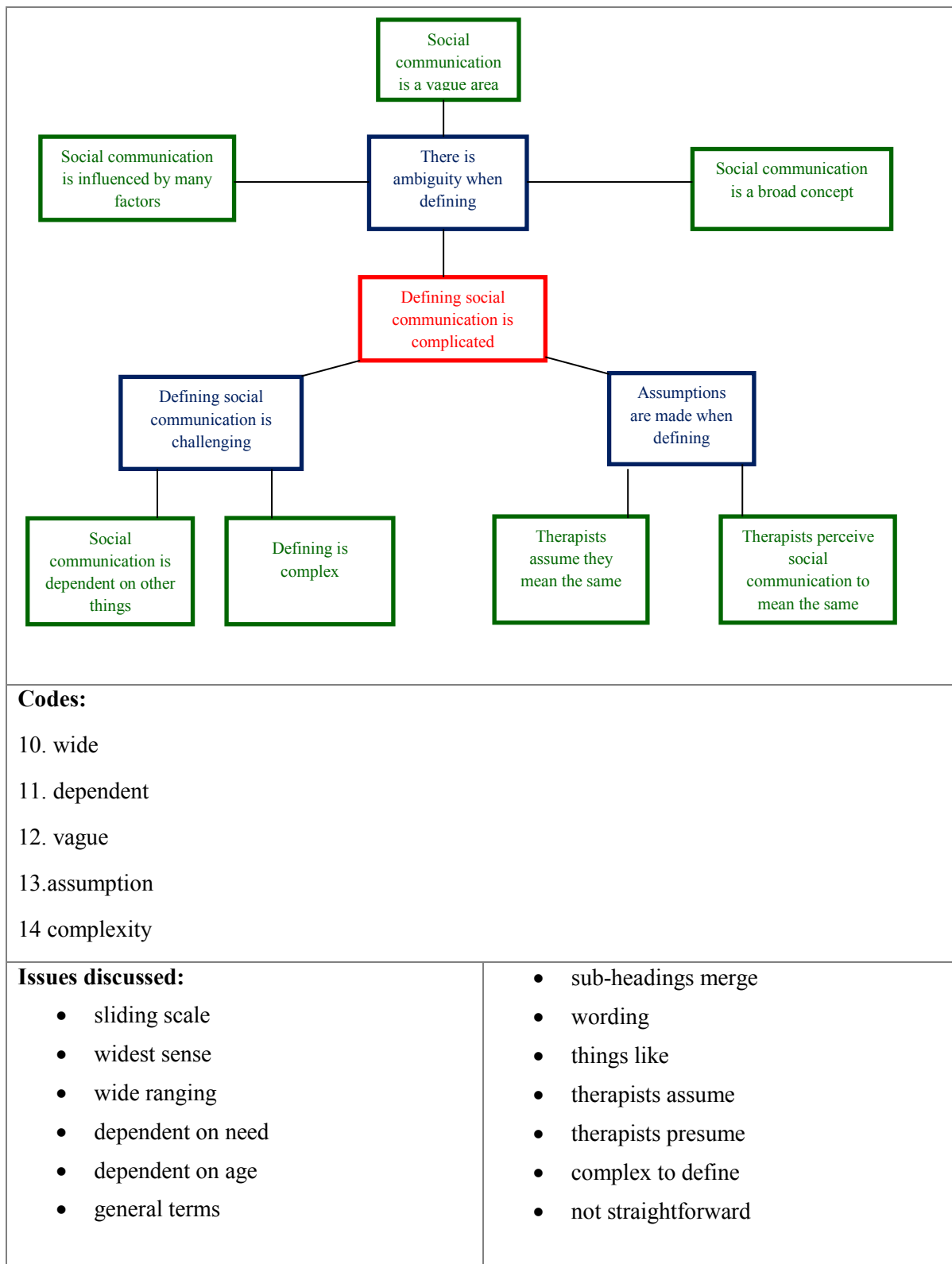
Table 11 – Global Theme 1: Defining social communication is complicated

Global Theme 1	Organising Theme	Basic Theme
Defining social communication is complicated	Assumptions are made when defining social communication	Therapists assume that they mean the same thing Therapists perceive social communication to mean the same thing
	Defining social communication is challenging	Defining social communication is complex Social communication is dependent on other things
	There is ambiguity in defining social communication	Social communication is a broad concept Social communication is a vague area Social communication is influenced by many factors

All the participants acknowledged that it was difficult to define social communication. The following quotes substantiate the evidence for these basic themes and highlight the view that the whole subject area is unclear.

I think that the problem with a definition is that it is a bit like trying to catch a spider. You think that you have got it and then one of the legs is sticking out and you have to try to shove it back in and have another go. You know … because it is so broad.

I think that the difficulty with trying to define social communication like sub-groups is they all merge.

Defining social communication is not as straight forward as I previously thought.

It is reassuring as we are saying the same things and we are just agreeing that it is very hard to write down.

According to participants, social communication is a broad concept that has a "sliding scale" covering a wide variety of sub-sections. Participants felt that the word 'communication' made the topic wider than some of the other terms commonly used by therapists, for example, 'use of language'. Language is seen as giving the impression of a more tightly defined developmental linguistic process. The positive aspect of the term

'social communication' is believed, by participants, to be the use of the term 'communication', which makes the whole concept much wider. Unfortunately the positive effect of widening the subject resulted in complicating the definition of the term. Participants were aware that they wanted a definition to be easily understood by lay people and, as such, fewer words are needed to cover this broad topic.

Social communication was seen by participants as dependent on a number of factors. It is also evident that therapists feel that the treatment of social communication is reliant on the needs of the individual. The fact that SALTs feel that social communication is dependent on certain factors and that it varies according to the child's age and needs makes defining it difficult.

As well as being viewed as a wide concept social communication is also considered to be a vague topic. It is described by participants as being a general term with sub-headings that merge together.   In trying to establish the range of factors that come under social communication it was apparent that in the views of the participants they all merge and link with one another thus making it extremely hard to produce a clear definition.   The boundaries between the individual factors that make up social communication are blurred. The focus group aimed to establish a definition of social communication but it soon became apparent that the group was unable to develop a very clear definition. This was not due to a lack of consensus but due to the unwieldy nature of the emerging product.

From the discussion it became obvious that defining social communication is complicated by the fact that the participants assume that they mean the same thing when they use the term. It may be argued that therapists perceive social communication to mean the same thing when they all use the term. Participants had never thought that people were confused when they talked about social communication. Therapists assume that they understand what each therapist means when they use the term social communication during a conversation or meeting.   However, when reading a report, the heading social communication is unimportant because the reader would know how the writer was defining it by the information that is put under that heading.

> *Facilitator:*   *Do we (therapists) assume that other therapists know what it means or do we **know** that we all mean the same thing?*
>
> *Participant:*   *I think that we would all take the same definition from the same book wouldn't we?*
>
> *Facilitator:*   *Has anyone ever come across a definition of social communication?*
>
> *Participant:*   *No (quiet and thoughtful tone of voice)*

Therefore defining social communication is complicated by the fact that therapists assume that they all have the same knowledge and assume that they are basing their definition on the same evidence in the literature. One dialogue posed by the facilitator summarises this point:

> *For me as a non-therapist I find it interesting to understand how you all came across or came to assume the same definition without like you said you have never come across a definition. But you have all come to at some point to assume it means the same thing.*

It is difficult to understand that therapists can come to a common agreement about a definition if it is based on assumptions.

Analysis also demonstrated that as well as social communication being difficult to define because of its ambiguity and due to assumptions of certain practitioners it is also a very complicated subject area. Talking about the subject highlighted its complicated nature and the fact that it is such a challenging topic with a huge variety of terminology subsumed within the umbrella term of social communication. The group gained reassurance that they were saying the same things and yet they gave the impression that they were finding it very difficult to put into words or to write it down.

5.2.2   Global Theme 2: Definition of social communication

Figure 8 - Visual representation of global theme 2: definition of social communication

Codes:

1. use
2. functional
3. context
4. social norms
5. conversational skill
6. knowledge of social world
7. interaction skills
8. appropriate style
9. adapting

Issues discussed:

- use of language
- functional communication
- contextual information
- non-verbal communication
- conversations
- body language
- processing information
- eye contact
- proximity
- turn taking
- topic maintenance
- making inferences
- emotions
- sarcasm

Table 12 – Global theme 2: A definition of social communication

Global Theme 2	Organising Theme	Basic Theme
A definition of social communication	Social communication has to take into consideration certain factors	It is adapting It has to be functional It is dependent upon social norms It is dependent upon context It is how we use language
	Social communication is an umbrella term	Conversational skills Appropriate style Knowledge of the world Interaction skills

Analysis of the data demonstrated the identification of a final group definition. Although they had all discussed this definition the participants remained dissatisfied with it. The group members produced a written definition and a more visual presentation of their ideas. There was a feeling from the analysis of the text that the final definitions were still incomplete. Although there was general agreement about the information they wanted, there was a divergence in how to draw together the previously discussed information and make it into a user-friendly format.

It is the person's own method of communication in the social group…it is tailored to the context.

There is a definite lack of awareness from the people who have the problems.

It was a common link that social communication was an umbrella term encompassing certain components. The group demonstrated commonality in their attitude towards the various components they placed under this umbrella term of social communication. This included conversation skills, knowledge of the social world, interaction skills and appropriate interaction style. Under each of these components they selected a set of further components, for example, turn taking, topic maintenance and eye contact. This was an

easy thing to do and produced the greatest agreement during the discussion. This indicated that therapists did have an agreed idea on what type of things came under the term 'social communication' but that to actually produce an accurate definition was difficult.

There was also a great deal of agreement that certain additional aspects needed to be taken into consideration when defining social communication. Social communication is how we use the language that we have. As previously discussed it was felt that the term language was a narrow view of this social aspect and that communication was a better term to use as it includes a wider range of skills. It was felt that social communication does mean how we use language. This language can be complex or simple but the way that we use it to interact is the important factor that relates to social communication.

It was agreed that social communication has to be functional. It is dependent upon the context in which a speaker or listener is in. Social communication involves adapting to different situations and environments. The group's definition of social communication was as follows:

> *Adapting your communicative behaviour according to the context and the environment in which you find yourself.*

The group also used the white board facility available to them to design a visual representation of their definition. Using an umbrella to represent social communication and placing various skills under each spoke of the umbrella.

5.2.3 Global Theme 3: Terminology

Figure 9 – Visual representation of global theme 3: Terminology

Codes:

    16. pragmatics

    17. social communication

    18. use of language

    19. different perspectives

    20. preference

Issues discussed:

- pragmatics as a term
- use of language as a term
- perception of semantic-pragmatic disorder
- similarity between pragmatics and social communciation
- do SALTs prefer one term
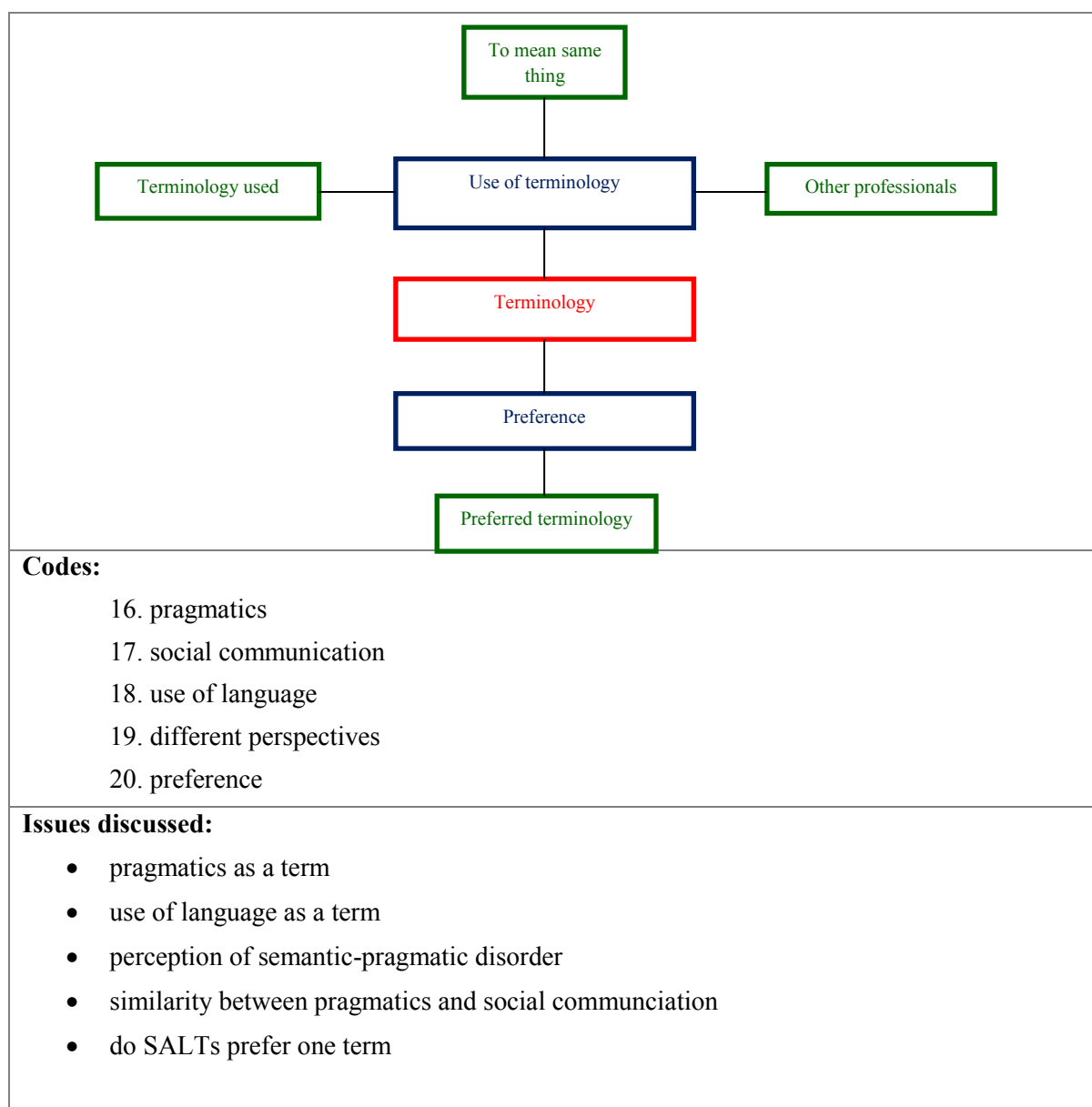
Table 13 - Global Theme 3: Terminology

Global Theme 3	Organising Theme	Basic Theme
Terminology	Use of terminology	Using terminology to mean the same thing
		Other professionals' use of terminology
		Terminology used
	Preference of terminology	Preferred terminology

The analysis of the focus group transcript also uncovered a debate surrounding terminology within the area of social communication. There is information regarding the variety and use of terminology and the preference that therapists have for different terms. This information from the data explores whether there is a clear understanding of the terminology surrounding the subject area of pragmatics and social communication.

The following quotes substantiate the evidence for these themes and highlight the debate around the terminology used.

Certainly people outside our profession now use the term social communication.

I think education see the term social communication as a heading that falls within autistic spectrum disorder.

I see social use of language being a much more tightly defined thing. I see social communication being the whole umbrella.

The participating SALTs use the term 'social communication'. They are also familiar with the terms pragmatics, use of language and semantic-pragmatics. Consideration was given to the term 'semantic-pragmatic' and data indicated that the term pragmatics can be associated or confused with the specific diagnosis of semantic-pragmatic disorder. Pragmatics was commented upon as being a medical definition and a common link among participants was that it was a more technical term. As well as a medical term, pragmatics was also described as a grammatical term and a linguistic term. This would indicate that these therapists find it difficult to place pragmatics within an overall model or framework of communication as they are unable to identify its theoretical basis. It also suggests that the term is almost feared by the participants because of how it may be perceived by others.

It was felt that the term 'use of language' became popular amongst the profession because of *The Social Use of Language Programme* (Rinaldi, 2001). It was agreed by the participants that 'use of language' as a term was interchangeable with the term 'social communication'. However, social communication provides more information and is, therefore, preferred by the participants.

According to the focus group findings the term 'social communication' is thought to be the term most commonly used by people outside of SALT. Specific mention was given to teachers and their increased use of this term. It was thought by the group that teachers use the term but that they may not necessarily use it to mean the same thing as therapists. The group suggested it is possible that teachers use the term in relation to autistic spectrum disorders, rather than as an element of communication *per se*.

Therefore, the three main terms identified within the group were social communication, 'use of language' and 'pragmatics'. Data showed that these terms have similarities and are frequently used to mean the same thing by SALTs. It has already been identified that the participants acknowledge that they use the term 'social communication'. During the discussions the following question was asked:

> *Facilitator:*   *Is there any terminology that you use in addition to social communication that you use to mean the same thing?*
>
> *Participant:*   *Well sometimes we use pragmatics.*

The group agreed that the terms are used to mean the same thing. If either of these terms were used during discussion or in a report there would be the expectation that they focused on the same area of communication.

A definition of pragmatics was presented to the group. The introduction of the definition of pragmatics, by the facilitator, taken from Nicolisi, Harryman and Kresheck (1996) prompted the group to deduce that they were very similar to their definition of social communication.

When a specific enquiry into the group's preferred use of terminology was made there was a bias of three to one in favour of the term 'social communication'. One participant felt they favoured the term 'use of language'. The preference given for social communication resulted from the inclusion of the word communication. This was viewed as a wider term and as such meant that much more could be encompassed under this concept. It was also felt that pragmatics was not used as it was less likely to be understood by people outside of the profession.

5.3 Summary of pilot study findings

The themes that have emerged from this pilot study go some way to address the following:

- How do therapists define social communication?
- Is there a clear understanding of the terminology surrounding the subject area of pragmatics and social communication?

Social communication is a term that is being used within the SALT profession and also across a wider forum. It is possible that this term is emerging as an alternative to the term pragmatics. Pragmatics is seen as an academic term that is more formal in style than that of social communication. Pragmatics is covered in the literature but is less likely to be used within the present day clinical setting. Despite the surge of data on pragmatics since the 1980s it would appear that clinically it is still an area of confusion.

Although the term 'social communication' is used across professions there is no clear concise definition available within the literature. The focus group found defining social communication very difficult and failed to come to a sound conclusion. On the whole there was a lot of agreement regarding the subject matter and what should be encompassed under the term 'social communication'; however a consensus was hard to come by.

The term pragmatics seems to have a lot of coverage in the literature which provides specific definitions of pragmatics. Despite therapists believing that they use pragmatics as another term for social communication they do not transfer the definitions of pragmatics to define social communication. This pilot study indicates that it would be beneficial to collect data from more SALTs and other professionals in order to try and establish what is meant by the term 'social communication' in the clinical and educational setting. The information from this pilot study informed the contents of the survey questionnaire and the second phase of focus groups.

6   Chapter Six – Questionnaire Findings and Interpretation

6.1   Introduction

This chapter will outline the findings from the questionnaire data (for procedure see 3.7.3). Each relevant question from the survey was asked of three different professional groups, teachers, SALTs and EPs. These will be addressed in turn. The qualitative findings from the open ended questions will be outlined and the analytical procedures undertaken will be explained and described. A brief interpretation of the findings will be presented. The numerical findings, from each professional group will be presented in charts followed by a brief interpretation. Where it is appropriate inferential statistics will be used. Outlining and briefly interpreting the findings will set the scene for a detailed discussion of all the findings in Chapter 9.

6.2   What is social communication?

All three professional groups were asked "How would you define social communication?" and the written responses were collated and transcribed. As outlined in 3.7.3 the most appropriate way to analyse the data from this specific question was content analysis. The aim was to find out how many participants used a certain descriptor in their definition of social communication; a frequency count. This would enable me to see how often specific descriptors were used by participants and also allow me to compare professional groups and establish if different professions have a tendency to use the same or different descriptors. Content analysis involves identifying a category or descriptor and counting the number of instances in which they are used in a text. Having chosen the descriptors by identifying the key words in every definition I was then able to count the number of times that they occurred. Tables outlining these findings can be found in appendix 16. The data from the different cohorts of professionals can be compared and inferences can be made from the analysis. The top twenty most frequently used descriptors were identified in each professional group as well as the top twenty most frequently used descriptors in total across all professions. Table 14 outlines the descriptors identified, the frequency and the percentage of the number of times that these occurred. For example, the total number of times that the SALT participants used the word *'understand'* was 11 and *'eye contact'* 9. These equate to 30% and 24% respectively. The total number of overall participants (SALTs, EPs and teachers) used the word *'understand'* 32 times equating to 34%.

Table 14 - The frequency of the descriptors used to define social communication

SALTs (n=37)			TEACHERS (n=35)			ED PSYCHS (n=21)			TOTAL (n=93)		
Understand	11	30%	With others	10	29%	Understand	11	52%	Understand	32	34%
Eye contact	9	24%	Understand	10	29%	Facial expression	4	19%	With others	19	20%
Interaction	8	22%	Interaction	7	20%	Convey	4	19%	Interaction	18	19%
Verbal and non-verbal	8	22%	Verbal and non-verbal	7	20%	Expressive	4	19%	Verbal and non-verbal	18	19%
With others	8	22%	Needs	7	20%	Interaction	3	14%	Needs	15	16%
Body language	7	19%	Listening	7	20%	Verbal and non-verbal	3	14%	Eye contact	15	16%
Conversation	7	19%	Body language	5	14%	Needs	3	14%	Facial expression	14	15%
Rules	7	19%	Facial expression	4	11%	Context	3	14%	Body language	14	15%
Facial expression	6	16%	Effective	4	11%	Views	3	14%	Listening	13	14%
Appropriately	6	16%	Feelings	4	11%	Group	3	14%	Context	11	12%
Listening	5	14%	Manner	4	11%	Body language	2	10%	Conversation	10	11%
Pragmatic	5	14%	Respond	4	11%	Effective	2	10%	Appropriately	9	10%
Needs	5	14%	Group	4	11%	Messages	2	10%	Effective	9	10%
Context	5	14%	Respond	4	11%	Pragmatic	2	10%	Views	9	10%
Volume	4	11%	Eye contact	4	11%	Taking turns	2	10%	Rules	8	9%
Knowledge	4	11%	Exchange	3	9%	Empathy	2	10%	Group	8	9%
Aware	4	11%	Initiate	3	9%	Theory of mind	2	10%	Pragmatic	7	8%
Effective	3	8%	Exchange	3	9%	Effectively	2	10%	Aware	7	8%
Tone of voice	3	8%	Messages	3	9%	Opinions	2	10%	Effectively	7	8%
Awareness	3	8%	Peers	3	9%	Eye contact	2	10%	Feelings	6	6%

The most frequently used word in a sentence to define social communication in all professional groups is "understand". However, other conclusions can be drawn from the content analysis of the definitions of social communication provided by the participants. Conclusions fall into three distinct areas as follows:

a. *Some words are specific to particular professions when they define social communication.*

- The words "conversation", "knowledge", "peers", "rules" and the phrase "tone of voice" were used frequently by **SALTs** but never by EPs or teachers.

- The words "feelings" "manner" "desires" "exchange/exchanges" "respond" and "initiate" are used frequently by **teachers** but not at all by SALTs or EPs.

- The words "convey" "expressive" "empathy" "opinions" "taking turns" and "theory of mind" are only used frequently by **EPs** but not used at all by SALTs or teachers.

b. *Some words are used more frequently by one profession than another when defining social communication.*

- "Body language" was used by all three professional groups but less frequently by EPs than by SALTs and teachers.

- The word "context" was used by all professional groups but less frequently by teachers than by SALTs and EPs.

- The words "appropriately" and "pragmatics" were used frequently by SALTs but less frequently by EPs and not at all by teachers.

- The word "needs" was used frequently by SALTs and EPs but more so by teachers.

- "Listen/listening" is frequently used by teachers, less so by SALTs and not used at all by EPs.

- The word "volume" is used frequently by SALTs but not used at all by EPs or teachers.

- The words "group" and "messages" were used frequently by teachers and EPs but not used at all by SALTs.

c. Some words are used frequently across all professions when defining social communication.

- The words "interaction" and "aware" were used frequently across all professional groups and so were the terms "verbal and non-verbal", "with others", "effective/effectively" and "facial expression"

After asking the participants to define the term 'social communication' a series of questions followed in order to collect data regarding educational provision and clinical practice.

6.3 How many of your current students do you believe have social communication deficits?

This question was asked, in order to establish, to what extent teachers, SALTs and EPs have individuals on their caseload that they would identify as having social communication deficits. All clinicians identify that they have children/young people on their caseload with social communication deficits but the proportion varies. It can be noted that 57% of teachers working within specialist educational provision feel that all of the pupils on their caseload have social communication deficits, whereas none of the EPs consider this to be true of more than 50% of their caseload. There is much more variation in the caseloads of the SALTs ranging from 22% of SALTs identifying all of their caseload as having social communication deficits to 22% identifying that less than 25% of their caseload have social communication deficits. Despite these variations, it is clear that within the clinical and educational (specialist provision) context professionals are working with a large proportion of children who they perceive to have social communication deficits.

6.4 In your opinion do individuals on your caseload receive help with social communication?

The previous question established that all professions have a proportion of their caseload that experience social communication deficits. This question intends to identify how many

teachers, EPs and SALTs (in terms of percentage) believe that individuals on their caseload receive help with their social communication.

Figure 10 - The percentage of teachers (n35)/EPs (n21)/SALTs (n37) who believe individuals receive help with social communication
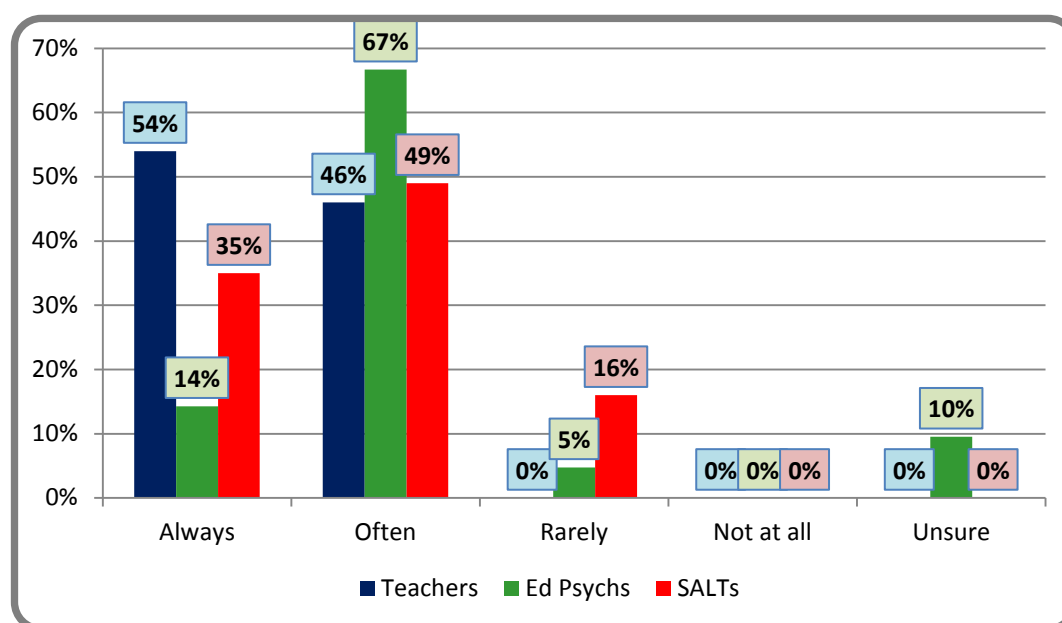
Data indicates that 54% of teachers and 35% of SALTs believe that individuals always receive help with social communication, whereas only 14% of EPs believe that children on their caseload always receive help (see Figure 10). Teachers are more positive than the other professionals in their opinion that children receive help, with 100% of them feeling that they always or often do. It is apparent that 16% of SALTs and 5% of EPs think that children rarely get any help with social communication and 10% of EPs are unsure. This data suggests that professionals perceive there to be help available for children and young people with social communication deficits but different professionals have different opinions regarding the extent of this help.

6.5 Which types of support are provided for children to help them with their social communication? Also indicate who provides this help.

This question builds on the data from the previous one with regard to support. It aims to identify the type of support that is provided and by whom. This question was presented on the questionnaire as a matrix asking each participant to identify which professional they

believed provided which type of support. Each participant could tick several options. The tables below therefore provide numerical data to show how many participants identified each profession and the type of support. The totals are not the number of participants but how many times all the participants together identified the profession or the type of intervention. For example, participant 1 could tick that the SALT provides social communication group, individual programme, advice to others and role modelling but participant 2 could tick that SALT only provides advice to others. A separate table is presented for the responses by each professional group.

Table 15 - The type of support and by whom as identified by teacher participants.

	Social Communication Group	Individual Programme	Advice to Others	Role Modelling	Total
SALT	30	32	28	27	117
Teacher	25	19	22	28	94
Ed Psych	1	11	19	2	33
Clinical Psych	0	6	10	1	17
SSA	19	21	10	21	71
Care Worker	9	10	5	15	41
Social Worker	2	5	9	3	19
Play Therapist	2	3	4	4	13
Total	88	107	107	101	406

Teachers report that SALTs, teachers and support assistants are most likely to be offering help with social communication (see Table 15). The type of support ranges fairly equally between social communication group, individual programmes, advice and role modelling. Role modelling is when an adult in the educational or clinical context actively models an appropriate social communication skill in order for the child or young person to witness the skill being used in an appropriate context. Teachers, support assistants and SALTs are identified by teacher participants to be most likely to offer social communication groups, individual programmes and modelling. SALTs, teachers and EPs are identified as offering advice to others in order to support children with social communication deficits. This data demonstrates that in the specialist setting, teachers experience there to be a variety of types of help offered to their pupils to support them with their social communication, and that this is usually provided by SALTs, teachers, support assistants and EPs.

Table 16 - The type of support and by whom as identified by EP participants

	Social Communication Group	Individual Programme	Advice to Others	Role Modelling	Total
SALT	13	17	17	3	50
Teacher	13	14	2	9	38
Ed Psych	6	9	20	3	38
Clinical Psych	3	5	12	1	21
SSA	10	13	1	6	30
Care Worker	1	2	0	1	4
Social Worker	1	1	3	0	5
Play Therapist	0	1	0	0	1
Total	47	62	55	23	187

EPs believe that SALTs, teachers, EPs and support assistants are most likely to be offering help with social communication (see Table 16) and that clinical psychologists do to a lesser extent. EPs believe that individual programmes are the type of support that is most likely to be offered (65 times EP participants identifying this) along with advice to others (58 times EP participants identifying this). EPs identify that social communication groups are provided but not by as many compared to individual programmes and advice. EPs identify role modelling as the least likely support to be offered but when it does happen it is likely to be by teachers and support assistants. Teachers, support assistants and SALTs are identified by EP participants to be most likely to offer social communication groups and individual programmes. SALTs, teachers and support assistants are identified as most likely to be the ones offering advice to others in order to support children with social communication deficits but EPs do to a lesser extent. This data demonstrates that in the educational and clinical context EPs experience there to be a variety of types of help offered to individuals on their caseload and this is provided most frequently by SALTs with teachers and EPs offering equal support and support assistants and clinical psychologists also providing some support.

Table 17 - The type of support and by whom as identified by SALT participants

	Social Communication Group	Individual Programme	Advice to Others	Role Modelling	Total
SALT	27	33	37	25	122
Teacher	10	9	9	13	41
Ed Psych	2	4	20	1	27
Clinical Psych	3	2	7	0	12
SSA	17	17	5	14	53
Care Worker	0	1	2	3	6
Social Worker	0	0	1	0	1
Play Therapist	1	1	0	0	2
Total	63	72	89	57	281

SALTs believe that it is they who are most likely to be offering help with social communication. They indicate that they provide social communication groups, individual programmes, advice to others and role modelling (see Table 17). Some participants believe that teachers also offer these types of support but more SALT participants felt that the support assistant offers these support strategies. SALTs see the role of the EP to be predominantly to offer advice to others regarding social communication. This data demonstrates that SALT participants believe that they have a significant role to play in offering different types of support to those with social communication difficulties. In the educational and clinical context SALTs believe there to be a variety of types of help offered to individuals on their caseload to support them with their social communication and that this is provided most frequently by SALTs with support assistants and teachers supporting them and EPs offering advice.

The data from these questions can be analysed using Spearman's R rank order correlation coefficient to establish if there is a correlation between professional groups in their opinion regarding who provides the most support for children and young people with social communication deficits. The data provided by the teachers, EPs and SALTs can be ranked and a correlation analysed between SALTs and EPs, SALTs and teachers and teachers and EPs. Table 18 outlines the results:

Table 18 – The outline of the results for Spearman's R rank order correlation

Correlation	Rs	Level of significance (p<)
Correlation between teachers and EPs	0.79	0.05
Correlation between SALTS and teachers	0.81	0.05
Correlation between SALTs and EPs	0.86	0.01

It can be concluded that there is significant agreement between the three professional groups regarding the professions that are most likely to provide support to children /young people with social communication difficulties. All three professional groups rank SALT to provide the most support.

6.6 Which types of support are provided for parents/carers to help them with their child's social communication? Also indicate who provides this support.

Having established the level of support that the participants believe is available to individuals with social communication deficits it was considered essential to establish whether support was offered to parents/carers and by whom. This question was also presented as a matrix asking each participant to identify which professional provided what type of support for parents/carers. Each participant could tick several options. It is important to note that the previous question identified that the support to the children and young people included advice. This question probes further to establish if the type of advice offered to parents/carers is verbal or written. The graphs below therefore provide numerical data to show how many participants identified the profession and the type of support. The graphs are presented in terms of each professional group of participants, one graph for teacher participant responses, one for EP participant responses and another for SALT participant responses.

Figure 11 - The type of support provided for parents/carers and by whom as identified by teacher (n=35) participants.
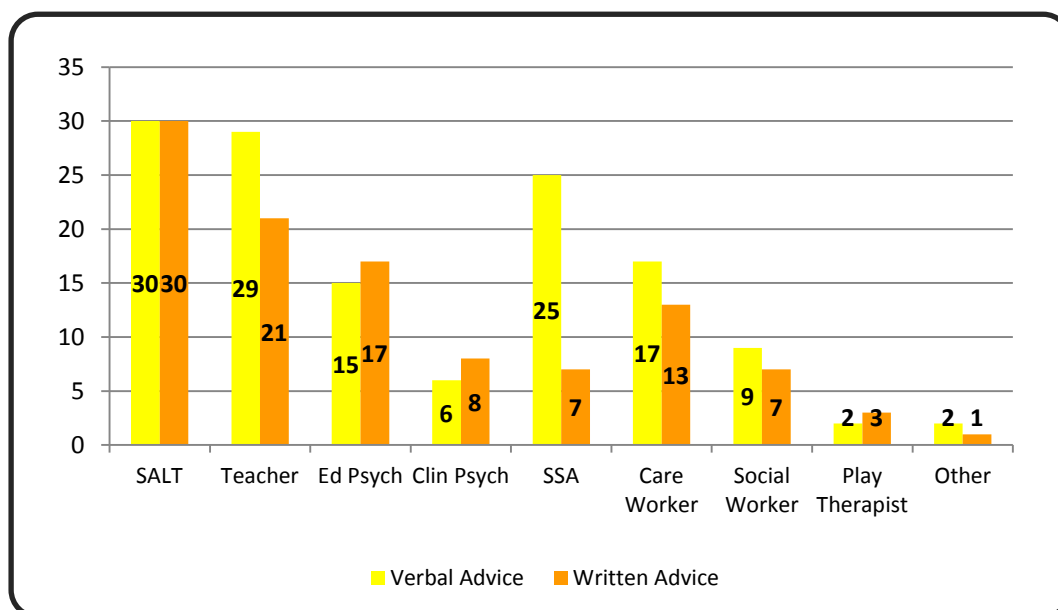
Teachers believe that most advice to relatives regarding their child's social communication is provided by SALTs both verbally and in writing (see Figure 11). They also believe that they as teachers have a large role to play in giving advice but more so verbally than in writing. Teachers indicate that support assistants provide almost as much advice as they do to parents and carers but this is rarely written. Other professionals may also give advice regarding social communication, including educational and clinical psychologists, care workers, social workers and play therapists.

Figure 12 - The type of support provided for parents/carers and by whom as identified by EP (n=21) participants.
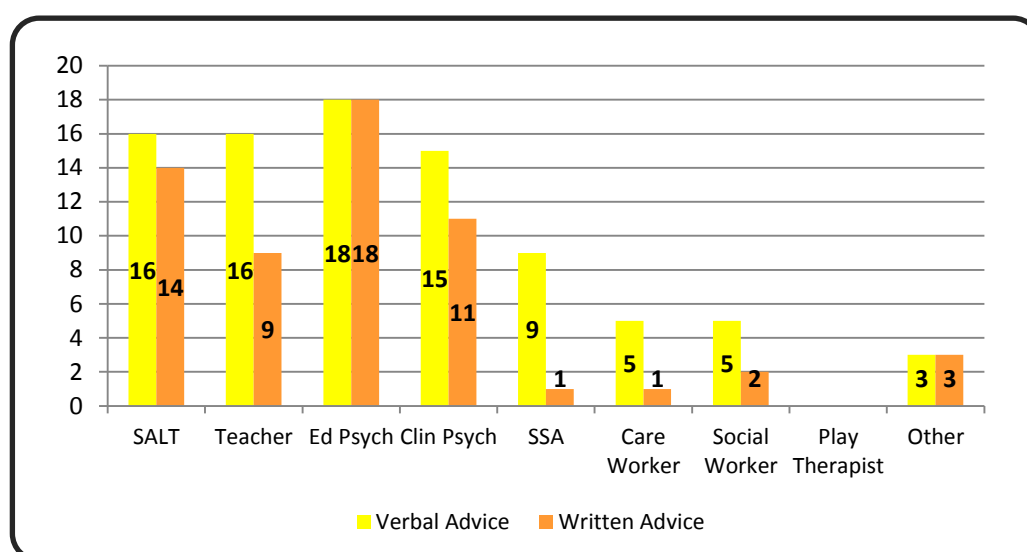
EPs believe that most advice to parents/carers regarding their child's social communication is provided by them (see Figure 12). However, they acknowledge that SALTs, teachers and support assistants provide a lot of verbal advice and SALTs also provide written advice. Other professionals may also give advice regarding social communication including clinical psychologists, care workers and social workers.

Figure 13 - The type of support provided for parents/carers and by whom as identified by SALT (n=37) participants.
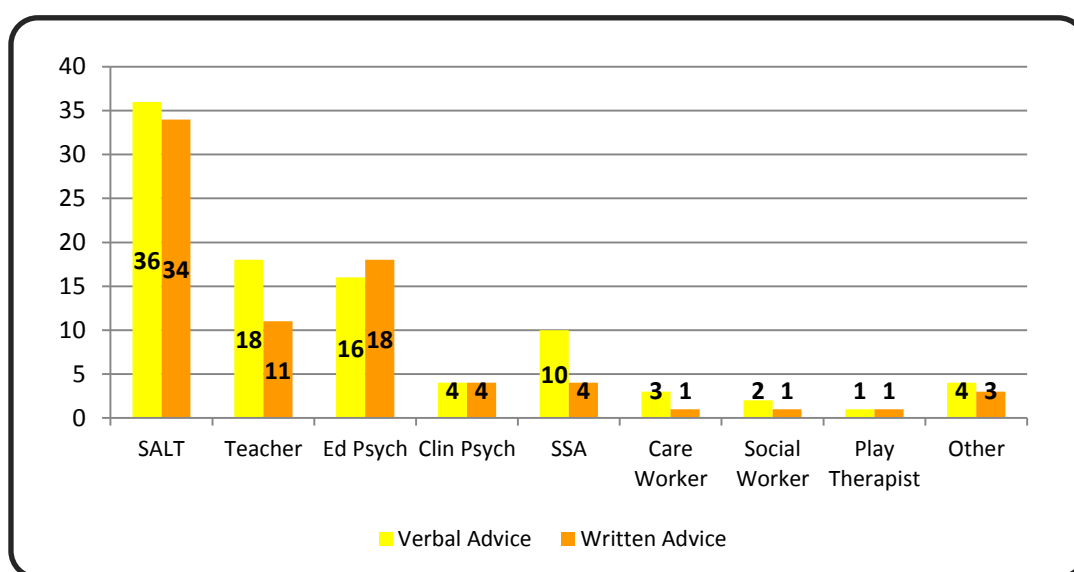
SALTs indicate that they have the most significant role to play in providing both written and verbal advice to parents/carers regarding their child's social communication (see Figure 13). The data suggests that they feel that teachers and EPs do have a role but far fewer SALTs indicated that this is the case.

The responses suggest that there is perceived to be a lot of advice being given to parents and carers, both verbally and in writing regarding social communication. Teachers perceive that a variety of professionals provide this advice. However, SALTs and EPs perceive that it is their own professions that give the most advice with SALTs indicating that they give considerably more advice than anyone else.

6.7 Do you feel that the support currently provided is sufficient?

Having established that support is being provided, the next question was required to probe regarding the sufficiency of the support offered. The opinions of the three professional cohorts of participants are presented in the graph below.

Figure 14 - The percentage of teachers (n=35)/EPs (n=21)/SALTs (n=37) that believe the support currently provided is sufficient
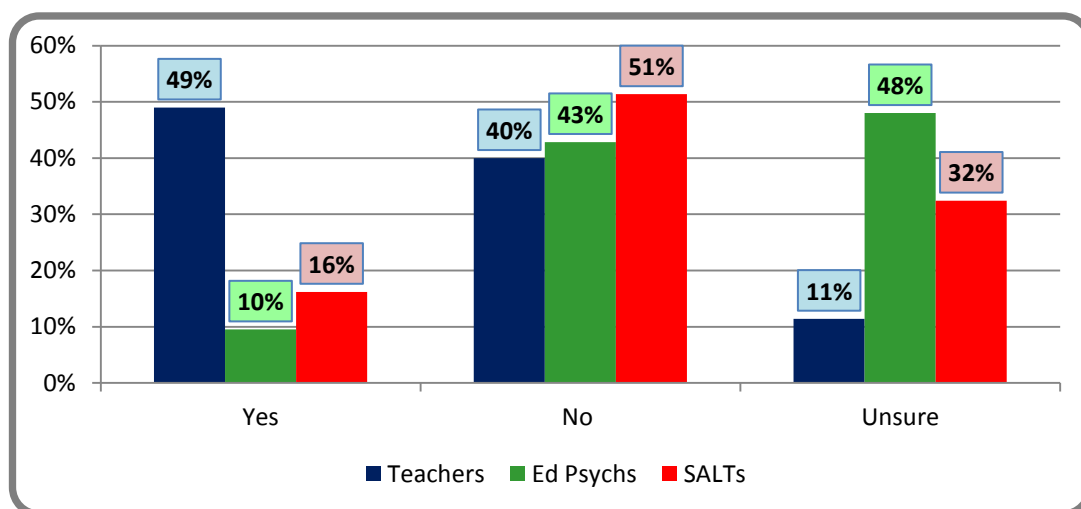
There is a relatively even split between teachers in their opinion regarding sufficiency of provision as 49% feel it is, 40% feel that it is not and the rest are unsure (see Figure 14). However, more than half of the SALTs feel that the support is not sufficient and only 16% feel it is sufficient. 32% of SALTs remain unsure. The data shows that 43% of EPs feel that the support is not sufficient with a further 48% unsure and only 10% think it is sufficient. The data suggests that although professionals acknowledge that there are a variety of types of support available to children/young people with social communication deficits and their parents/carers, this support is not necessarily sufficient. SALTs and EPs have more doubt regarding the sufficiency of the support than teachers do. In order to identify if this difference between professionals regarding the sufficiency of support is significant a statistical analysis is necessary.

To establish if there is a significant difference in the distribution of "yes," "no" and "unsure" responses as rated by SALTs, EPs and teachers, the data was analysed using Chi-Square. For df=4, a X² value of 13.28 would be significant at p=0.01. Therefore, as X² =14.21 (df=4), p<0.01, the significant difference between observed and expected

frequencies of responses for the three groups, and the differences in patterns of response, demonstrates that teachers were significantly more likely than EPs and SLTs to regard support as sufficient.

6.8   Rationale regarding sufficiency of support

Following on from the question "Do you feel the support currently provided is sufficient?" participants were asked to expand on their answer. This has provided qualitative data to supplement the quantitative findings. This data was collated and analysed thematically. The textual data was coded inductively and these codes were organised into basic themes, condensed to provide organising themes and further manipulated to provide global themes. Tables 19, 20 and 21 summarise the global themes that the comments generated.

Table 19 - Global Themes generated from teacher participants regarding the sufficiency of the support provided

Global Theme	Organising Theme	Basic Theme
Resources	Time restraints	Lack of time
		Timetable constraints
	Adequate staffing	Small class
		Sufficient SALT
		Range of professionals
	Limited staffing	Insufficient SALT
		Waiting for a post
	Finances	More money needed
Global Theme	**Organising Theme**	**Basic Theme**
Type of support	Partnerships	Parents are not involved
		Relationship between parents and staff
		Daily contact with parents
	Intervention	Direct intervention
		Training
		Curriculum
		Programmes to follow
	Quality and experience	Specialist provision
		Improvement in quality and expertise

Table 20 - Global Themes generated from EP participants regarding the sufficiency of the support provided

Global Theme	Organising Theme	Basic Theme
Resources	Time restraints	Lack of time Curriculum
	Adequate staffing	Effective team
	Limited staffing	Insufficient SALT Increased caseload Insufficient support assistants
	Finances	Funding issues
Global Theme	**Organising Theme**	**Basic Theme**
Type of support	Partnerships	Parents need to be involved
	Inconsistency	Patchy Variable Sporadic More necessary
	Quality and experience	Specific team Training

Table 21 - Global Themes generated from SALT participants regarding the sufficiency of the support provided

Global Theme	Organising Theme	Basic Theme
Resources	Time restraints	Lack of time Timetable Curriculum
	Limited staffing	Insufficient SALT Increased caseload
	Finances	Funding issues
Global Theme	**Organising Theme**	**Basic Theme**
	Partnerships	Parents need to be involved Co-working

Type of support	Inconsistency	Environment
		Variable
		More necessary
	Intervention	Training
		Approach
	Quality and experience	Specific knowledge
		Specialist setting
		Training

This data demonstrates that SALTs, teachers and EPs believe that whether the support for individuals with social communication deficits is sufficient, is dependent upon two key factors:

- o   Resources
- o   The type of support offered.

6.9   Do you feel that social communication improves with this support?

Having established that support is being provided and identifying whether this support is regarded as sufficient, the next question asked about the effectiveness of the support offered. The opinions of the three professional cohorts of participants are presented in the graph below.

Figure 15 - The percentage of teachers (n=35)/EPs (n=21)/SALTs (n=37) that believe social communication improves with this support
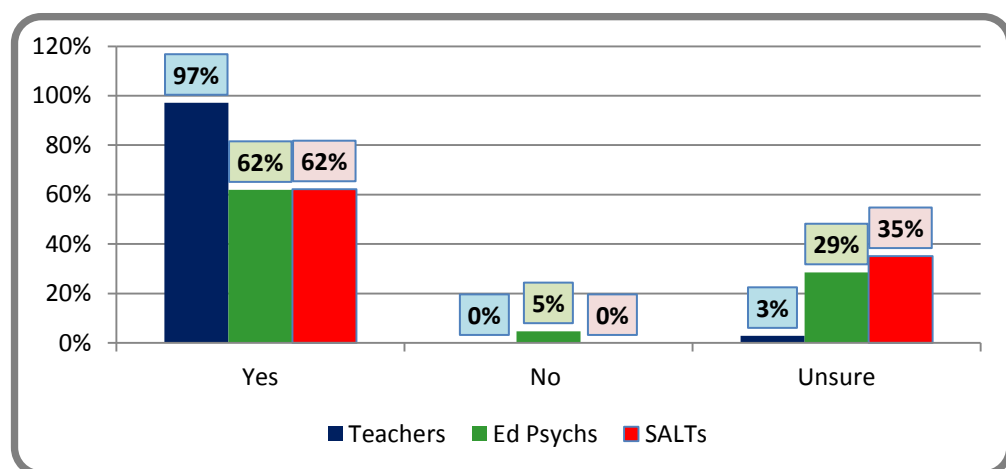
All but 3% of the teacher participants feel that social communication improves with the support provided (see Figure 15). However, although 62% of SALTs and 62% of EPs agree that social communication improves the remainder are unsure or feel that there is no improvement.

6.10 Rationale regarding improvement with support

Following on from the question "Do you feel social communication improves with this support?" participants were asked to expand on their answer. This has provided qualitative data to supplement the quantitative findings. This data was collated and analysed thematically. Codes were allocated to the textual data and these codes were organised into basic themes, condensed to provide organising themes and further considered to provide global themes (Attride-Stirling, 2001). The following tables (22, 23 and 24) summarise the global themes that the comments generated.

Table 22 - Global Theme generated from teacher participants regarding improvement made with the support provided

Global Theme	Organising Theme	Basic Theme
Is there improvement?	Evidence	Parental comment
		Professional opinion
		Observation
	Contributions to improvement	Consistency
		Group work and programmes
		Collaborative work and systems
	Limitations of improvement	Slow progress
		Lack of knowledge/expertise

Although 21 EP participants answered the question regarding the sufficiency of the support only 11 participants explained their answer. This did not provide enough data to generate any themes. However Table 23 provides examples of the comments made.

134

Table 23 - Comments generated from EP participants regarding improvement made with the support provided

Where support is available it is helpful
Carefully planned and implemented individual programmes delivered by support assistants are effective
Yes when support provided. No when it is not.
Some children need to be taught these skills implicitly.
Although with some children it may be within the bounds of learnt patterns of behaviour.

Table 24 - Global Theme generated from SALT participants regarding improvement made with the support provided

Global Theme	Organising Theme	Basic Theme
Is there improvement?	Evidence	Assessment/measurement
		Professional opinion
	Contributions to improvement	Consistency
		Group work and programmes
		Collaborative work and systems
	Limitations of improvement	Difficult to measure
		Generalisation
		More needed

In considering improvement of social communication SALTs and teachers believe that there are things that contribute to improvement being made and that there are certain factors that provide evidence for this. However, there are things that limit the possibility of improvement.

6.11 Summary of questionnaire findings

The survey has collected data from three different professional groups. It has enabled an analysis of how the individual participants define social communication and compared the definitions across professions. It has generated data to show the percentage of each participant's professional caseload whom they believe to have social communication deficits, what help is given and by whom and whether this help is perceived to be sufficient

and effective. Initial interpretation indicates that there are many descriptors used by all three professional groups in order to define social communication. Within the clinical and educational context, professionals believe they are working with a large proportion of children who they perceive to have social communication deficits. Professionals perceive that there is help available for these children on their caseload and for their parents and this help is provided by a range of professionals. Although professionals acknowledge that this support is offered they are unsure as to the sufficiency of such support, and its success is dependent upon resources and on the type of support offered. The majority of professionals believe that social communication improves with the support that is available, but they also identify certain factors that limit the improvement. This data complements some of the data collected by the pilot study focus group and helps to inform the structure of the next phase of focus groups. Parallel to all of this is the synthesis of the literature relating to social communication. The data collected from the survey incorporated the views of three professional groups. To collect more data from a specific professional group was considered vital in order to explore the concept of social communication in the clinical and educational context. I chose Speech and Language Therapists as the profession to be invited to focus groups to pursue some of the concepts and themes generated by the survey. Speech and Language Therapists were rated by all three professions to have an involvement in supporting children and young people with social communication deficits.

7   Chapter Seven – Focus Group Findings and Interpretation

7.1   Introduction

In the pilot study outlined in Chapter 5 (see 3.7.2 for procedure, participant selection and analysis) I followed Attride-Stirling's (2001) six step approach to analysing qualitative data in order to generate thematic networks. This was a valuable way of exploring the text and reducing or breaking down the transcribed material. I felt that this process enabled me to code the data systematically, providing me with themes grounded in the data that could be linked together to further enrich the findings. Due to the effectiveness of this method in the pilot study I decided that the same system of data analysis would be used to analyse the texts generated by the further three focus groups. I used the following steps to generate my themes.

- I read and re-read the transcription from focus group one to increase familiarity with the data
- I then marked in the margin of the transcript the key issues that arose from the text
- These issues were used to devise a coding framework
- The text was dissected into text segments using the coding framework
- From this framework I then established basic themes, organising themes and the broader global themes, following Attride-Stirling's procedure

As outlined in Chapter 5 the information was coded on the basis of key issues that arose from the text. These codes were then applied to the textual data identifying meaningful chunks, quotes, passages or sentences linking to that issue. These coded key issues were then reviewed and condensed to provide 'basic themes'. These themes were easily abstracted from the coded text segments. Once the themes had been identified it was necessary to arrange them and condense them further to provide a global set of themes. This allowed a general overview of the data to be established. The identified themes generated from the coded text were transferred to become *basic themes*. By grouping these basic themes it was possible to rearrange them into broader *organising themes* and these were then summarised into *global themes*. The coding framework from the first focus group was used for the next two focus groups. Any new issues that arose from the text generated additional themes and the framework was adapted to incorporate them.

7.2 Findings

Figure 16 is a visual representation of the themes that emerged from all three focus groups. Four global themes have emerged from the analysis. The four global themes will be discussed separately describing the organising themes and basic themes that allowed the global theme to emerge. Basic themes will be substantiated with direct quotes from the focus groups.

Figure 16 – A visual representation of global, organising and basic themes that emerged from the Focus Groups

KEY
GLOBAL THEMES
ORGANISING THEMES
BASIC THEMES

Social communication in the broadest sense

Complexity

Aspects of social communication

Use of the terms social communication and pragmatics

Value and origin of the term

Definition of social communication

Aspects of pragmatics

Confusion

Use of the terms

A Terminology

Definition of pragmatics

Types of assessment

Measures of progress

General issues influencing social communication

Professional judgement

Assessment / measurement

Influencing factors

Specific issues influencing social communication

Effectiveness

Quality of evidence

Influencing factors on outcomes

D Outcomes

Exploring Social Communication in the Clinical and Educational Context

B Underlying causes/aetiology

Autism

Social communication is the first thing you think of

Subjectivity

Social communication is a term more commonly associated with ASD

Effectiveness of group work out of context

Generalisation of skills

Understanding the primary issue

Specific causes

Social communication is used instead of autism

Can children generalise?

Unpicking the cause

Strategies to help generalisation

Types of intervention

C Intervention

Factors that impact

Direct intervention

Intervention models

Why and how to teach a skill

Strategies and programmes

Collaborative working

Changing the environment

Logistical factors

Indirect intervention

Professional knowledge

Direct input from SALT versus third party

139

7.2.1 Global Theme A: Terminology

Figure 17 - A visual representation of Global Theme A: Terminology

		Aspects of pragmatics		Confusion		KEY

Aspects of social communication

Social communication in the broadest sense

Definition of pragmatics

KEY
GLOBAL THEMES
ORGANISING THEMES
BASIC THEMES

Definition of social communication

TERMINOLOGY

Use of the terms

Complexity

Use of the terms social communication and pragmatics

Value and origin of the term
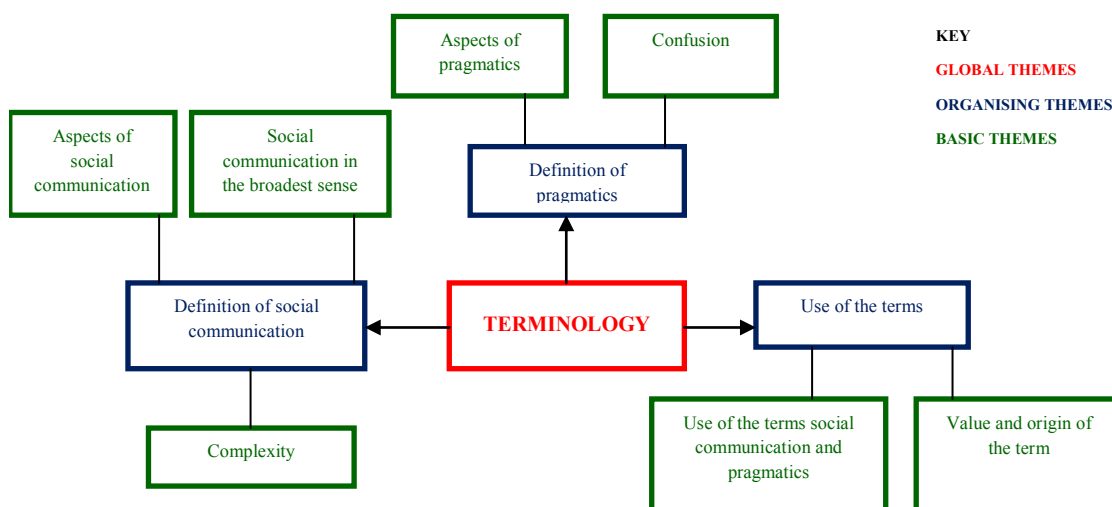
Table 25 – Global Theme A: Terminology

Global Theme	Organising Theme	Basic Theme	Issues discussed
Terminology	Definition of social communication	Aspects of social communication	Aspects of social communication
			Intuitive
			Socialisation
			Not a language problem
			Understanding non-verbal communication
		Social communication in the broadest sense	Start and end a conversation
			Refer to all children
			Functional
			One aspect **of** communication
			Every situation is social communication
			Not clearly defined
		Complexity	Difficult to define
			Sub-headings
			Developmental pattern
			Different types
	Definition of pragmatics	Aspects of pragmatics	Ambiguity
			Language
			Function
		Confusion	What it is not
			Use of language
			Eye contact and non verbal skill
	Use of the terms	Use of the terms social communication and pragmatics	Use of pragmatics
			Value of pragmatics
			Interchangeable terminology
		Value and origin of the term	Overlap of the terms
			Use of the term social communication
			Origin of terminology

7.2.1.1. Organising theme: Definition of social communication

The subject of terminology was a theme throughout all three focus groups (see Figure 17 and Table 25). Therapists found it very difficult to define the term 'social communication'.

It's nebulous isn't it?

I can't explain it really; it's really hard to describe it actually.

Discussions centred on trying to establish what is meant by social communication and in doing so they also discussed the term pragmatics. How the terms 'social communication' and 'pragmatics' are used within the context of a population of children and young people with communication difficulties emerged from the focus group debate. In attempting to define social communication the therapists within each focus group established key aspects or attributes that they would assign to the term 'social communication'. These attributes have been coded under basic themes as aspects of social communication such as 'sense of humour', 'social understanding', 'facial expression', 'tone of voice', 'turn-taking' and 'eye contact'. These are regarded by therapists as being elements of social communication and one participant described social communication to have sub-headings.

It is sort of an umbrella term that there can be all sorts of different manifestations.

The participants refer to social communication being just one aspect of communication that can refer to all children. They believe that social communication is not clearly defined and that it is difficult to do so. A basic theme also drew on the fact every situation is social and there are likely to be different types of social communication.

Facilitator: *Are there different types of social communication?*

Participant: *I think that there definitely are.*

Facilitator: *In that they've all got social communication difficulties but that they're actually different types aren't they?*

Participant: *They're for different reasons, they arise for different reasons.*

The focus group discussion also developed themes regarding the developmental pattern of social communication; therapists indicated that there are developmental norms but that it is linked to personal experience. The pattern is complex and there are no definitive conclusions as to what the developmental pattern is.

It is based vastly on people's personal experiences.

7.2.1.2 Organising theme: Definition of pragmatics

The participants indicated that pragmatics, in a similar way to social communication, has key elements that can be acknowledged as aspects of pragmatics, for example, 'understanding ambiguity', 'eye contact' and 'non-verbal skills'. It is suggested that pragmatics is more linked to language than social communication is and that pragmatics tends to focus on function. Some of the discussion linked pragmatics and social communication as being similar in their definition and that the two are used interchangeably. Some participants indicated that the two terms have subtle differences in their meaning with some overlap. It was agreed that this interchangeable use of terminology is very confusing for parents.

> *Facilitator:*　*Do you feel that social communication and pragmatics are perhaps the same thing?*
>
> *Participant:*　*Yes, interchangeable.*

> *I think it is very difficult for parents though you know because they are not always involved are they? I mean we obviously do try and involve them as much as we can, but for them terminology must be quite difficult to understand.*

7.2.1.3 Organising theme: Use of the terms

According to participants, both of the terms 'social communication' and 'pragmatics' are used within the educational and clinical settings. One term is used more than the other with social communication being the more favoured term. One participant indicated that the use of the term 'social communication' may have come from the link to autism.

> *I think social communication is more what we live and breathe and work isn't it. It's not necessarily become formalised yet but used as professional jargon.*

> *It has been used as a euphemism for autism hasn't it?*

7.2.2 Global Theme B: Underlying causes and aetiology

Figure 18 - A visual representation of Global Theme B: Underlying causes and aetiology
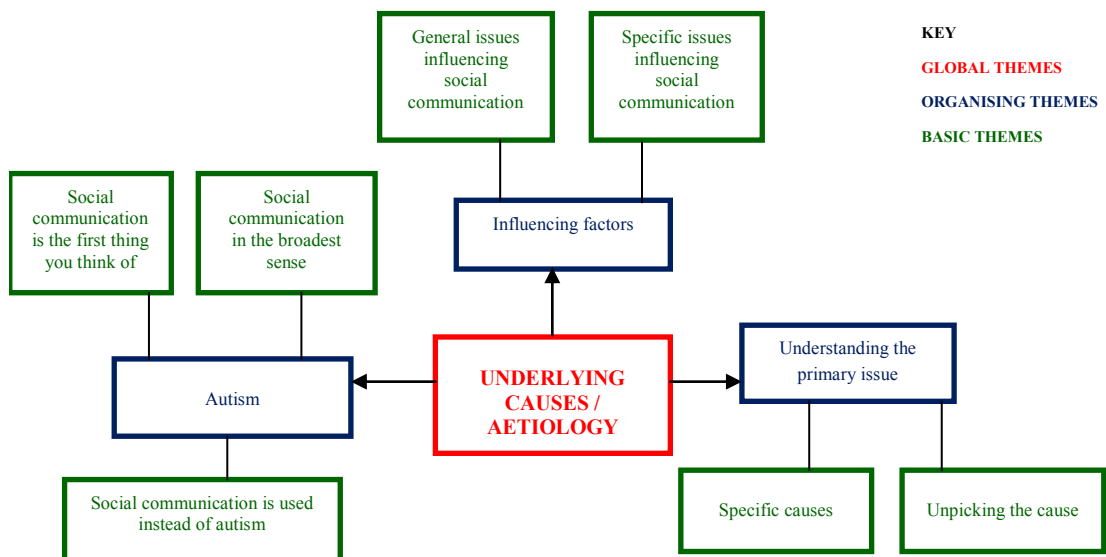
Table 26 – Global Theme B: Underlying causes and aetiology

Global Theme	Organising Theme	Basic Theme	Issues discussed
Underlying causes/aetiology	Influencing factors	General issues influencing social communication	Cultural issues
			Familiarity
			Personality
		Specific issues influencing social communication	Background
			Self esteem
	Autism	Social communication is the first thing you think of	How autism is linked to social communication
		Social communication is a term more commonly associated with ASD	
		Social communication is used instead of autism	
	Understanding the primary issue	Specific causes	Behavioural Emotional Social
			Specific speech and language issues
		Unpicking the cause	Which comes first?
			Not just autism
			Expectations

Analysis of the data highlighted the importance associated with understanding the underlying reason why a child or young person would have difficulties with social communication (see Figure 18 and Table 26).

7.2.2.1 Organising theme: Influencing factors

The participants identified that there are many influencing factors that impact upon social communication and that understanding the primary issue has an impact on intervention and education. Factors that may influence a child or young person's social communication were discussed. Cultural issues, personality, familiarity and self-esteem were all believed to affect the way someone interacts. A child's background can influence how someone communicates and the SALT participants discussed these factors.

I think it is linked to personality. My own children are very quiet and you know and they could be pragmatically or social communication wise be regarded as having a problem.

And personal experiences, what some people would consider rude other people wouldn't.

7.2.2.2 Organising theme: Autism

One of the organising themes that emerged from the data was that autism is considered to be a significant factor or underlying cause of social communication deficits. Interpretation of the data demonstrated that participants believe that autism is very much linked with the term 'social communication'.

Yes, I think sometimes professionals look at each other and say - do we mean social communication difficulties or autism? If you said autism parents would go [intake of breath]

The data from the focus group participants also demonstrated that, although autism is a significant underlying cause of social communication difficulties, there are lots of non-autistic individuals who demonstrate social communication deficits.

Yes. But then equally you can be not autistic but have social problems.

7.2.2.3 Organising theme: Understanding the primary issue

Participants agreed that it is important to establish the underlying cause of a social communication difficulty but that it is not always clear. It is very difficult to separate behaviour and communication. It was also suggested that it is very difficult to identify what comes first. Does the behaviour cause the social communication difficulties or does the social communication difficulty cause the behaviour?

Well I don't know how you tell which one came first. If a child's labelled EBD (Emotional Behavioural Difficulties) then what's the reason why they are EBD and from whatever has caused them to be EBD. Have they then got social communication difficulties because they are so EBD and no one is interacting with them or did they have social communication difficulties and because they couldn't communicate they became EBD?

7.2.3 Global Theme C: Intervention

Figure 19 - A visual representation of Global Theme C: Intervention
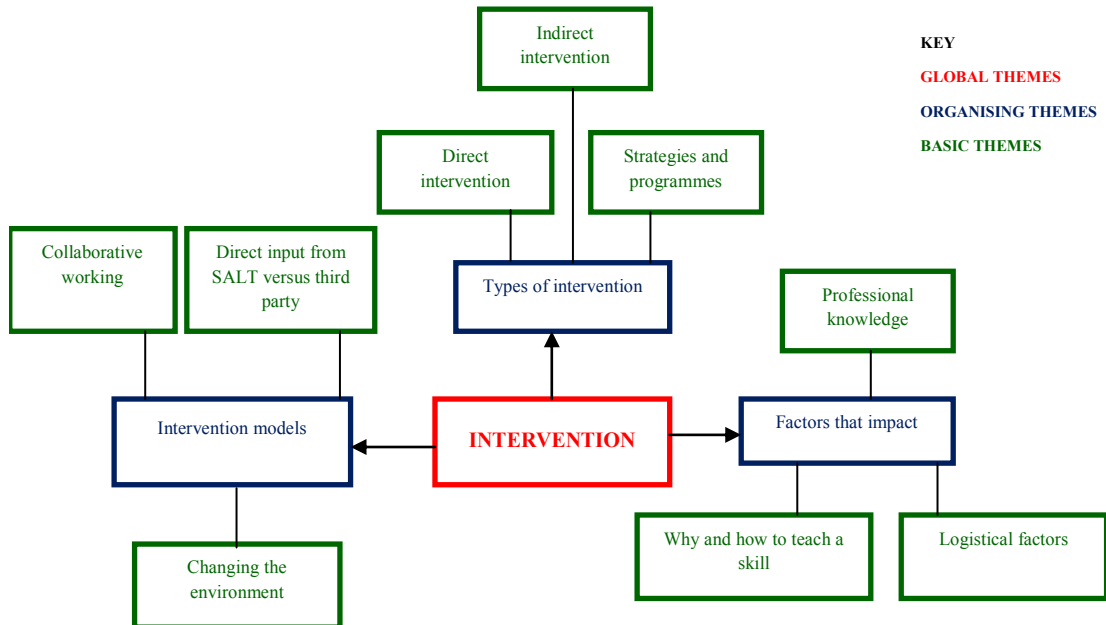
Table 27 – Global Theme C: Intervention

Global Theme	Organising Theme	Basic Theme	Issues discussed
Intervention	Types of intervention	Direct intervention	Group
			Social stories
			Social use of language programme
		Strategies and programmes	Circle time
			Training
			Awareness
		Indirect intervention	Support in school
	Intervention models	Collaborative working	The best way of working with children with social communication difficulties
		Direct input from SALT versus third party	
		Changing the environment	
	Factors that impact	Why and how to teach a skill	Appropriateness of teaching a skill
			Usefulness of teaching a skill
		Logistical factors	Priority of need
			Circumstances
			Areas to intervene
			Why intervene?
		Professional knowledge	Frequency of intervention
			Professional confidence
			Logistical implications
			Prioritisation
			Evidence-base/theory

Analysis of the focus group text also uncovered a debate about intervention within the area of social communication in the educational and clinical settings (see Figure 19 and Table 27). Discussion incorporated the types and models of intervention and the factors that impact on intervention.

7.2.3.1 Organising themes: Types of intervention and intervention models

The SALTs within the focus groups all offer intervention to a cohort of children and young people who they have identified as having social communication deficits. Most intervention is group based as communication is not seen as something that can be taught in isolation.

Some of the focus group participants identified specific programmes for group work, for example, The Social Use of Language Programme (SULP), Rinaldi (2001) and Circle Time, (www.circletime.co.uk). These programmes are used but are likely to be adapted to meet the needs of the working clinician and the population of pupils.

> *When I have tried to follow a set programme I have failed abysmally because it has not kept all of them focused and I have thrown that away and gone with the flow. It has been a bit easier for me then really.*

One specific strategy, Social Stories (Gray, 1998) was identified by several of the participants as an intervention that could be used with individuals rather than groups. All but one of the focus group participants were familiar with how to use Social Stories to remediate a specific deficit in understanding a social situation. This type of intervention was described by participants to be useful in certain scenarios with certain pupils.

> *Sometimes it works beautifully if you have the right kind of child.*

The data demonstrates that SALTs complement direct interventions with additional strategies. Developing children's social communication requires them to have a certain level of self-awareness. It is therefore apparent that increasing a child's awareness of their social communication skills is considered to be an important aspect of intervention.

> *I think that we see our role as to make them aware.*

> *If they've got the awareness they will generalise that if they want to.*

Training and support offered to schools is also considered an aspect of intervention. However, participants feel that it does not happen enough. Training can be in the form of modelling rather than formal training sessions.

Erm, I think it does happen, but not enough.

It can be concluded therefore that the SALT participants were able identify that there are different types of intervention that they provide in order to support individuals with social communication issues. However they also go on to discuss how there are various models of intervention and styles of approaches that they take into consideration when deciding upon the most appropriate form of intervention to offer. SALTs emphasise the importance of collaborative working. There is a belief when working with children and young people with social communication difficulties that collaborative working is vital. Collaborative working within the educational setting enables more knowledge sharing regarding the communication skills of the child as the teacher and the teaching assistants have more time to get to know the child. Joint planning is seen as a positive model in the remediation of social communication difficulties. Good working links between professionals are thought to increase the opportunity to share terminology and promote a shared understanding of the issues connected to social communication.

> *I usually do it with the teacher and the classroom assistant because they know the child better than I do because they are working with them.*
>
> *I think if you've got good working links with the other professionals and you do a lot of joint working it goes a long, long way to share terminology and that shared understanding that we were talking about.*

7.2.3.2 Organising theme: Factors that impact

Although collaborative working is considered a good model of intervention the SALT participants discussed the fact that it is not always carried out effectively. They also believe that their profession is often perceived to be solely responsible for the remediation of social communication issues. One participant also stated that some teaching professionals do not recognise that there is a communication difficulty if the child has adequate speech and language.

> *One thing that I would like to see change is for Speech and Language Therapists not to be thought of as solely responsible for social communication, I want there to be more joint responsibility and joint working with educational staff.*
>
> *Exactly, that we don't own social communication, there should be more joint initiatives.*

150

Although the SALT participants agreed that there should be more collaborative practice they also voiced opinions regarding whether intervention offered to individuals with social communication deficits should be provided by a SALT directly or via a third party. There was a consensus that SALTs have professional knowledge that underpins their decision making and as such makes them the most appropriate professional to carry out direct intervention with children and young people with social communication difficulties. Although SALT participants want 'joined up' professional thinking and collaborative practice when it comes to direct intervention they believe that they are the most experienced and appropriately skilled professional to intervene.

> *If you give it to someone else to do they are not trained in the same way as we are and they are not looking at the same things.*

> *Facilitator:*   *Do we feel therefore that SALTs are the best ones to try and remediate those students with social communication deficits?*
>
> *Participants:*   *Yes definitely.*
>
> *Participant 2: I think it is definitely our area of expertise.*

As well as debating who should deliver any intervention in the area of social communication, reference was made during the focus group to the necessity of changing the environment. This can be posed as a model of intervention. Not only is direct intervention plus collaborative working essential but consideration must be given to the communication environment.

> *We're spending a lot of time working with parents and educational staff and looking at modifying the child's environment to make it easier for them to cope.*

SALTs identified different types and different models of intervention. Discussion then revolved around the numerous factors that impact on these different interventions. The SALT participants feel that their intervention approaches are complicated by many different aspects.

Consideration must be given to the appropriateness of teaching certain skills. A debate regarding teaching children and young people how to use eye-contact appropriately emphasises the importance of this issue.

We teach our children all the time that what helps us to listen is to look at the person's face but it doesn't actually help him listen in fact it really distracts him.

If you look at children on the autistic spectrum they may find eye contact unbelievably uncomfortable and even though you teach it, teach them how they can do it, they're not necessarily going to use it as they don't feel comfortable using it.

As well as considering the appropriateness and usefulness of teaching a skill, deciding which skill to work on, why and how often, all impact on the model and type of intervention. SALT participants acknowledge that it is difficult to know which skill to work on first. When a child is younger the therapist can decide the area of priority but when they are older the individual should be involved in decided what to work on.

It is difficult to know which skill you work on first.

You kind of look at what is causing the most problems.

It was discussed by SALT participants that the decision to offer intervention should be dependent on the individual situation. If a child is happy and comfortable then they shouldn't be forced to interact and socialise but should be guided to understand what options are available, however, if a child is unhappy and wants to be involved socially then more support must be available.

I think it depends on the individual to some extent, and the situation.

A key issue that impacts on SALTs' decisions regarding intervention was identified as logistical implications. Large caseloads and a busy work schedule impact on the therapist's ability to offer the intervention that may be necessary. Obviously time constraints have an impact on all therapeutic interventions across all client groups. However, the discussion emphasised the fact that intervention for individuals with social communication difficulties is more time consuming and complicated. It can also go unnoticed by others and as such can become a lower priority. It was implied by the SALT

participants that they are more likely to focus on offering intervention to children with more specific and quantifiable speech and language issues as it is easier to measure the success of the intervention.

> *We choose the ones that we kind of feel work, like the language disorder and the phonology and it's the social communication ones that get left to one side because we can't justify that time.*
>
> *It could be a whole morning to take a child to do something. But have you got the time to do that?*
>
> *The intervention that we have is based entirely on our service management and the constraints that that generates.*

The logistics of offering intervention is constrained by the educational placement that a child accesses. Individuals in specialist provision are more likely to have peers with similar needs and, therefore, the therapist can organise intervention more easily. However, many individuals with social communication difficulties are in the mainstream setting and offering intervention to them is much more complicated.

> *One of the big issues that are very real to Speech Therapists is that quite often you have got them in mainstream schools. How on earth do you give them any service whatsoever?*
>
> *The sort of work that the therapist wants him to do is as part of a group but it is going to have to be the learning support assistant that does it because the therapist can't do it because these other children are not on the SALT books.*
>
> *You've got one child that has got this need within one school, what do you do?*

Resources, including time and staff, provide logistical barriers to therapists in offering intervention in all settings. Lack of resources also impacts on the quality of the intervention and how well the skills are generalised. The discussion also indicated that the SALT participants believe that circumstances impact on their decision making with regard to intervention. They believe that intervention is dependent on the situation that the child is in. Sometimes it is not seen by other professionals as a priority to work with a child with social communication difficulties. Also the type of intervention can be dictated by circumstance rather than by informed decisions.

> *This child has got social communication difficulties so I am going to stick them in a Social Use of Language Programme Group.*

> *Well it is the only choice that we have got isn't it? We have to because if we didn't do that then we do nothing, and we don't want to do that.*

It is reported by the SALT participants that intervention is affected by logistical implications and the need to prioritise, however, this is also combined with a lack of professional confidence amongst the participants. The conversation between the participants indicated that they doubt their ability with individuals with social communication difficulties compared to other speech and language issues. This lack of confidence will impact on intervention.

> *I question myself a lot. Am I making a difference here? This child has got social communication difficulties so I am going to stick them in a Social Use of Language Group. But am I actually achieving anything? But I don't know and I cannot ignore the fact that they have got social communication difficulties so I still do emotions and I do what I think is my best, but am I actually changing?*
>
> *But if somebody said to me do you think the programme works I would have to put my hand on my heart and say I don't know.*
>
> *I mean we wouldn't be doing it if we didn't think it was having an effect I mean we really wouldn't.*

Therapists indicate that they lack confidence not only in the effectiveness of their intervention but also in the terminology that they are using and the evidence base for their models and interventions. The SALT participants questioned their own opinions within the focus group sessions.

> *There are paradigms and things aren't there, there's very basic research isn't there?*
>
> *I mean it took me years to work out what pragmatics was because it certainly wasn't around 29 years ago when I started! I find that really hard in SALT constant changing of terminology.*
>
> *I have got quite disillusioned really over the last few years.*

Therapists within the three focus groups indicate that what they do in their intervention to support children and young people with social communication is grounded in theory. However, their responses to questions regarding their theoretical knowledge are vague. Their evidence base is underpinned by a lack of confidence. There are assumptions that

what they do is based on theoretical principles. None of the participants were able to provide any specific evidence base for their intervention. This assumption that they do will impact on the quality of their intervention models.

> *I think that there is a theoretical base there. I mean I couldn't quote names to you but I feel I could go off to the speech therapy library and pull something out to show you.*

> *Facilitator:*   *Do you feel that the intervention that you're actually doing currently is based on any theoretical knowledge?*

> *Participant 1:*   *I'm sure it must be.*

> *Participant 2:*   *It's not because there's any evidence or research background to it.*

7.2.4   Global Theme D: Outcomes

Figure 20 – A visual representation of Global Theme D: Outcomes
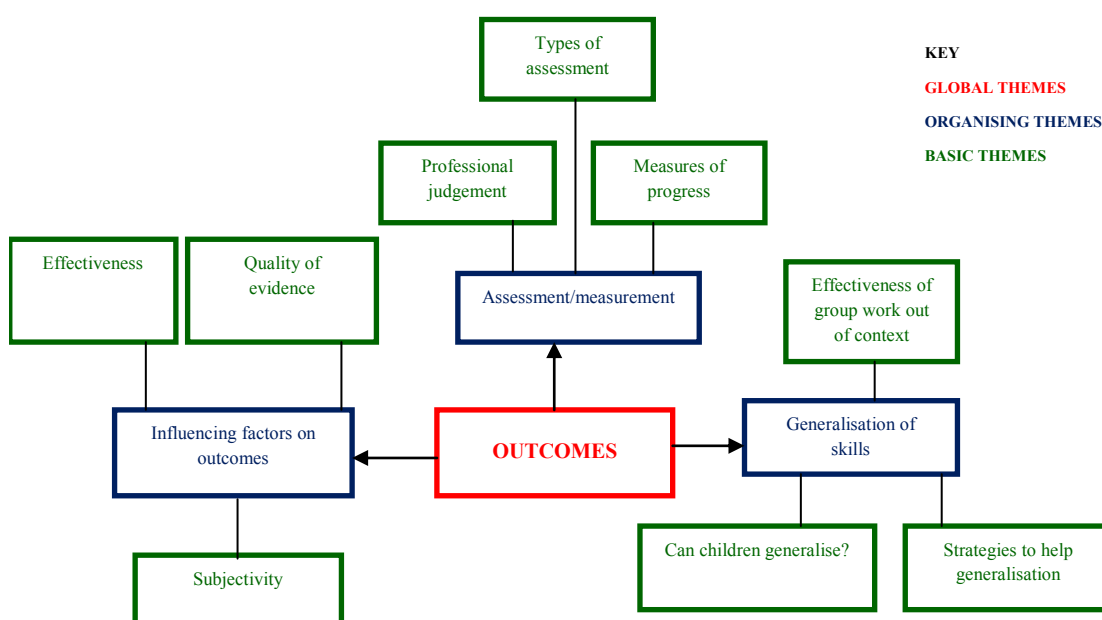
Table 28 – Global Theme D: Outcomes

Global Theme	Organising Theme	Basic Theme	Issues discussed
Outcomes	Assessment/ measurement	Types of assessments	Observation
			Self-reflection
			Reporting
			Checklists
		Professional judgement	Professional judgement
			Informal conversation
			Outcome of social stories
		Measures of progress	Speech therapists
			Evidence of progress
	Influencing factors on outcomes	Effectiveness	Depends on origin
			Effectiveness
			Subjectivity
		Quality of evidence	Evidence is vague
			Evidence is complicated
		Subjectivity	Effective use of resources
	Generalisation of skills	Effectiveness of group work out of context	How to consider transference of skills
		Can children generalise?	
		Strategies to help generalisation	

7.2.4.1 Organising theme: Assessment/measurement

Assessment is a fundamental aspect of a SALT's role when working with any client group. Accurate assessment is essential to provide a baseline by which to measure progress. Measuring progress can be defined as outcomes. The data from the focus groups provides information regarding assessment and measurement of social communication, factors that influence outcomes and how social communication skills can be generalised (see Figure 20 and Table 28).

The focus group data generated five key types of assessment and these are observation, self-reflection, reporting, checklists and informal conversations. The data suggests that assessment is perceived to be very subjective but that different methods can be used to establish an overall picture of a child's social communication profile. Observation is the key component to assessment and is described as being a large part of the process.

> *I think that's a large part of it actually observing them in social settings, in their naturalistic social settings, it's a large part of it.*

However observation is not easy and is not always accurate. Observation is time consuming and needs to be carried out in a number of settings with a variety of different people in order to produce a clear picture. It needs to be accompanied with other methods of assessment.

> *I think the difficultly too comes when .... I mean I've got one child at the moment who I'm starting to observe, all these things that everybody else tells me goes on, but every time I've observed this child he's been fine, and you know how many more times do I have to go to catch him out? And how ridiculous is that?*

Reports from other sources can supplement direct observation. With older children and adolescents it is important to talk to them about their own views. It is important to encourage them to self-reflect and to ascertain their opinion about their own communication abilities. According to SALT participants this is not always easy as the individual's self-awareness may not allow for an accurate reflection.

> *I don't think that they have the insight really.*

> *But we haven't got that many students with the ability to reflect on their own behaviour we have probably got three or four in the whole school really.*

The SALT focus group participants indicate that they use checklists as an assessment tool for social communication. These are described as being useful but time consuming. They believe they are also subjective and do not cover every aspect. Checklists should be used in conjunction with observations.

> *I think the checklists are always quite useful, interviewing teachers.*

> *I'm not sure there's one checklist or two out there that covers all the non-verbal and verbal aspects that we've been talking about.*

Informal conversations can also contribute to the assessment process and supplement direct observation. However participants believe that all observations are underpinned by a SALTs professional judgement.

> Facilitator: Do you think that a lot of assessment is on gut reaction then?
>
> Participant: Yes, I keep it all in my head; I think you carry things round in your head don't you?

> I think it's more, the gut reaction type thing, you look and you know.

This professional judgement comes from SALT training and from experience. SALTs believe that they are the best people to assess this area of communication. They have the ability to observe and interpret the observations. SALTs are the professionals that have the ability to draw all the information together.

> I think we have the skills in observation haven't we that people don't have.
>
> We're good at picking up on strategies, if a child isn't understanding in a classroom but is copying other children or their routine, we're able to pick up on the fact that they haven't understood that or they're struggling.
>
> I think that as therapists it's useful to have a role in trying to bring it all together as well, collecting information from home and school, and children can be very different in those situations as well. That's a very important crossover that very few other people seem to make.

The conclusion that can be drawn from the focus group data regarding assessment and measurement is that there is not one single tool and different strategies should be used in order to measure or assess social communication. By doing this there is more likely to be a baseline in order to measure progress. However, it is discussed that an accurate measure is not possible as so much assessment relies on observation, subjectivity and professional judgement.

> It is extremely difficult to measure because a child might improve because they are maturing, because they happen to be in the right school.

7.2.4.2 Organising theme: Influencing factors

The focus group data indicates that measuring outcomes is not an easy process and participants comment on specific factors that influence any outcomes. A major factor that affects measures is the subjectivity of the data collected.

> *I think it is all just so objective, sorry subjective I mean. Because especially if you are trying to measure improvement.*

Evidence for progress is described as vague and complicated. Progress is almost measured in terms of an overall impression of the individual's performance. It is complicated by the fact that there is not always a pattern of steady progress. Outcomes differ according to the underlying cause of the social communication deficit and some children do not make obvious progress.

> *I think it is more effective in certain areas.*

> *It sounds very defeatist to say but you're not always looking at a pattern of steady developmental progress. As children get older and social demands increase then they can appear to become worse socially because what's happening with their peers is changing and they're not able to keep up with that.*

One participant indicates that they assume progress rather than measure it.

> *I mean we wouldn't be doing it if we didn't think it was having an effect I mean we really wouldn't.*

7.2.4.3 Organising theme: Generalisation

SALT participants agree that one of the biggest difficulties with regard to intervention and measuring outcomes is that of generalisation. There was debate regarding how effective group work is if it is delivered out of context for the child. When considering intervention models generalisation must be factored in to the programme in order to fully support these children and young people. SALT participants considered the possibility that children and young people may never be able to generalise the skill if they have limited self-awareness.

> *They do and quite often they will be able to tell you the rules of good listening but not apply them.*

But if they've got the awareness they will generalise that if they want to.

I would still question whether, even if you had all the resources in the world, are these skills going to be generalised out into the community?

7.3 Summary of focus group findings

Analysis of the three focus group transcriptions has generated four global themes. These themes complement the data that has been generated from the questionnaires and from the pilot study focus group. Themes that have been generated from all participants are also reflected in the themes that have risen from the synthesis of the literature as discussed in Chapter 4. The SALT participants from the three focus groups were invited to be interviewed regarding their specific interventions with pupils they describe as having social communication deficits. Four participants consented to be interviewed. The next chapter details the findings from the semi-structured interviews.

8 Chapter Eight - Semi-structured Interview Findings and Interpretation

8.1 Introduction

The findings from the focus groups informed the questions for the subsequent interview stage (appendix 17). The interviews were semi-structured using questions that were grounded in the data from the synthesis of the literature, the pilot study and the focus groups. This allowed the interviewer the flexibility to explore personal experiences as they developed and also provided an opportunity to address in more detail the issues raised in the focus groups. All participants from the focus groups were invited to be interviewed; therefore the interview participants were selected using a purposive sample from the focus groups. Three SALTs were interviewed (see 3.7.5 for procedure). Table 29 provides the pseudonym of each therapist, their employer and the place where the intervention took place.

Table 29 – Semi-structured interview participants

Therapist Pseudonym	Employer	Place of intervention	Experience
Amy	NHS Trust	Mainstream Secondary School	Highly specialist
Pam	Independent Special School	Independent Special School	Specialist
Julie	NHS Trust	Mainstream Primary School, specialist unit	Specialist

Framework analysis was used to analyse the data from the semi-structured interviews. Data management involved deciding upon themes under which the data could be labelled, sorted and compared (Ritchie & Lewis, 2003). A framework was constructed using the themes that had already emerged from the synthesis of the literature, the pilot study and the focus groups. Any new themes that emerged from the semi-structured interviews were to be added into the framework. Any of the themes that were not supported by the interview text were to be removed from the framework; the themes that were in the focus groups but did not emerge from the interviews were redundant in this framework but will be revisited in the discussion. The result was that a final framework emerged that could be used to analyse thematically the personal narratives from the therapists regarding their own

practice. Table 30 demonstrates how the final framework developed and Table 31 is the final conceptual framework.

Table 30 - Identified themes that are matched to the data source

Themes	Literature synthesis	Pilot study	Questionnaire	Focus group	Interviews
1. A definition of social communication	✓	✓	✓	✓	
2. A definition of pragmatics	✓			✓	
3. The use of terminology	✓	✓		✓	✓
4. Preference of terminology	✓	✓			
5. Defining social communication is complicated	✓	✓			✓
6. Models of language development	✓				
7. Aetiology/underlying causes	✓			✓	✓
8. Factors that may influence social communication				✓	
9. Autism linked to social communication	✓			✓	✓
10. Understanding the primary issue				✓	
11. Measures/assessment	✓				✓
12. Types of intervention/strategies used	✓			✓	✓
13. Intervention models	✓			✓	✓
14. Factors that could impact on intervention			✓	✓	✓
15. Outcomes	✓		✓	✓	✓
16. Possible influencing factors on outcomes			✓	✓	✓
17. Facilitating the generalisation of skills				✓	✓

Table 31 - Final conceptual framework

Conceptual framework or index for semi-structured interviews
1. The use of terminology
2. Defining social communication is complicated
3. Aetiology/underlying causes
3.1 Autism
3.2 Speech and language issues
3.3 Cognitive limitations

	3.4 Personality
	3.5 Unknown origin
	3.6 Understanding the primary issue
	3.7 Factors that may influence social communication
4.	Autism linked to social communication
	4.1 Theoretical knowledge derived from autism literature
	4.2 Do those with ASD benefit from intervention?
	4.3 Are different approach necessary?
	4.4 Name of diagnostic team is social communication team
	4.5 Social communication groups include pupils with ASD
5.	Measures/assessment
	5.1 Therapists devise their own checklists
	5.2 Eclectic measures
	5.3 Informal assessment/observation
	5.4 Anecdotal evidence
	5.5 Intervention as assessment
	5.6 Complex area to assess
6.	Intervention models
	6.1 SALT led groups
	6.2 Functional approach
	6.3 Blocks of intervention/format
	6.4 Integrated approach
	6.5 Staff support/awareness
	6.6 Evolving approach
	6.7 Group formation
	6.8 Increased awareness
	6.9 Location
7.	Types of intervention/strategies used
	7.1 Eclectic approach
	7.2 Student led
	7.3 Social stories
	7.4 Comic strip conversations
	7.5 Group work
	7.6 SULP activities
	7.7 Talkabout
	7.8 Individual work
	7.9 Counselling
8.	Factors that could impact on intervention
	8.1 Time
	8.2 Theoretical knowledge
	8.3 Logistical implications
	8.4 Staffing/funding
	8.5 Professional confidence
	8.6 Circumstances
9.	Outcomes
	9.1 Checklist/rating
	9.2 Staff recording
	9.3 Parental comments
	9.4 Self awareness
	9.5 Informal
10.	Possible factors that influence outcomes
	10.1 Time

10.2 Learning process for SALT	
10.3 Limitations of group work	
10.4 Lack of target setting	
10.5 Lack of collaboration	
10.6 Lack of parental involvement	
10.7 No specific model	
11. Facilitating the generalisation of skills	
11.1 Intervention should incorporate generalisation	
11.2 Informal approach to generalisation	
11.3 Parental involvement	
11.4 Support staff	

How the framework was used to analyse the semi-structured interview data

Having constructed the initial conceptual framework it was necessary to apply the raw data. This process is referred to by Ritchie and Lewis (2003) as 'indexing'. Indexing is a system of fitting the categories to the data. By applying an index it indicates which theme is being referred to within a specific section of the text. The SALTs' personal narratives from the semi-structured interviews were indexed and allocated to each theme of the framework. Using index categories brought material together into themes. Some material was assigned to multiple locations because on occasions single passages had relevance to two conceptually different subjects. After completing the indexing of the text and allocation to themes it was necessary to summarise and synthesise the original data. Each theme is then analysed, reported and substantiated with direct quotes from the interview.

8.2 Analysis and interpretation of the themes as outlined in Table 31

8.2.1 The use of terminology (theme 1)

Julie and Pam both made reference to the recent increase in the use of the term social communication and they commented on their experiences of how this term is often used in relation to autism. Julie described how the diagnostic team for autism, within her locality, is titled the "Social Communication Assessment Team". She believed that this is one of the reasons that the term 'social communication' is used more frequently and said:

> *But with the social Communication Assessment Team now, the term social communication is becoming used a lot more in the area.*

> *Social communication disorders and all the things around it have really exploded in the last ten years or so; it is still a fairly young area.*

8.2.2 Defining social communication is complicated (theme 2)

Julie described a scenario where a colleague is asked to write a report for the social communication team but she always writes about language rather than social communication. Her narrative indicated that she feels that social communication is a more recently used term that many therapists find difficult, Julie states:

> *I think for a lot of the sort of my generation and possibly older, social communication is a bit difficult.*

8.2.3 Aetiology/underlying causes (theme 3)

All three interviewees reported that they offer group intervention to children and young people in order to improve their social communication skills. Pam, Amy and Julie all provided information about the individual members of their groups. This information outlines the underlying cause of the social communication deficit. For example, Amy described one of her caseload as a stammerer and that his stammer is the underlying cause of his social communication difficulties:

> *The stammerer is slightly different I think. For him it's been the barrier of stammering which causes him difficulties.*

Several of the children or young people are reported to have a diagnosis of ASD. Other group participants are described by the therapists as being immature or having cognitive limitations, or as being shy and that their social communication is part of their personality. In one instance a pupil is described as having social communication difficulties with no known origin. Amy said:

> *We have got one very immature. We have got two in terms of personality of very quiet, shy, person and I think maybe that's all we are looking at. And the other one I can't say at this stage, I haven't sussed him.*

Pam said:

> *I have got one group where I have got three kids who are definitely autistic. Another child who is not socially confident and needs social communication work, but actually has got severe speech and language problems and severe cognitive deficits. And another one who is MLD/SLD borderline and has social communication as part of that.*

This discourse highlights the theme that emerged from the literature synthesis regarding the underlying causes of social communication deficits. It gives strength to the notion that social communication is difficult to define due to the diversity and range of causes. The data gathered from the literature synthesis also indicates that it is difficult to establish the primary cause of an individual's social communication difficulties. This concept emerged from the interviews when Pam made the following statement when asked to describe social communication; *"Right, are we talking about primarily social communication difficulties or social communication difficulties as part of the whole picture?"* By using this sentence it could be interpreted that Pam is trying to identify what the primary cause of social communication difficulties really is. Can an individual have social communication difficulties as their primary need or deficit (primarily social communication) whilst others have social communication difficulties resulting from other issues (social communication difficulties as part of the something else)? It is also possible that Pam is asking if primary social communication disorder exists or whether it is always a characteristic of some other diagnosis. This theme emerged from the literature synthesis quite extensively but this specific distinction did not emerge in either of the other interviews. Pam commented that cultural aspects also impact on social communication:

I think there is also the cultural aspect of things which is very significant.

8.2.4 Autism is linked to social communication (theme 4)

There is data from the semi-structured interviews that demonstrates a perceived link between social communication and autism. Although they have treatment groups of mixed ability and differing social communication needs, all three interviewees referred to children and young people in their groups as having an ASD. Julie mentioned that the diagnostic team for autism within her locality was named "The Social Communication Assessment Team" and as mentioned earlier in section 8.2.1, this directly associates the term social communication with the ASD population. It is also believed to have had an impact on the number of children who receive a formal diagnosis. Julie indicated that in her geographical area the creation of this team has meant that there has been an increase in appropriate ASD diagnosis and also that there are more children being identified who have social communication difficulties but who do not meet the criteria for an ASD:

> *So I think social communication is being used an awful lot more because there are children out there that do have problems but then you couldn't hand on heart call them ASD.*

Two of the SALTs interviewed reported that children and young people can have social communication difficulties that result as a manifestation of their ASD. These individuals are believed to require different approaches to those who do not have a diagnosis or have social communication difficulties resulting from a different origin. There is a common view among the interviewees that the strategies that are successful for those with ASD do not necessarily work for those who do not have ASD and vice versa. Pam felt that:

> *With those Asperger kids I think we're looking at survival strategies and what you can accept as being part of yourself but different and what you are going to have to change in order to make the world work.*

Amy stated that she works very closely with a teacher who specialises in running social communication groups with children with ASD. They collaborate in order to discuss their different approaches and to try and establish if certain strategies work better with those on the autistic continuum than with those who are not, Amy commented:

> *To compare our approaches, and for her to guide us in a way, well why doesn't that work for the ASD children, and for us to guide her on why are we putting that in anyway, because our non-ASD children actually need it.*

Amy goes on to consider whether children with ASD actually benefit from her model of intervention. Her response indicated that in her clinical experience it is difficult for those with ASD to generalise any of the skills taught within the group. It must be considered that for a skill to be functional it is necessary for it to be used in a variety of contexts. Amy indicated that success is connected to motivation and an understanding that a skill has relevance when she commented:

> *One of them isn't benefiting at all, and one of them is benefiting in terms of knowledge and understanding, but I'm quite convinced that it won't change his interaction.*

Another issue that arose from the data in relation to social communication and ASD is that sometimes a clinician's theoretical knowledge in the area of social communication originates from the ASD literature. Pam made specific reference to the volume of current

literature that there is within the field of autism. She also referred to her own knowledge having developed from courses and from reading literature written by specialists in the field of autism, Pam stated that:

The theoretical and knowledge base that I have got…. I have been on some courses, I have read some books and I tie in closely with Tony Atwood. I am trying to understand Simon Baron-Cohen. Presumably one day I will, not yet. There is that much stuff around autism it is completely mind boggling, there must be six books out a week!

As there are children and young people with a diagnosis of ASD in the intervention groups described by each therapist there is an automatic link between social communication and ASD. Pam said:

I have got another group where they are all definitely autistic.

Julie stated:

We have a class of eight children. Very roughly they've got to be cognitively capable of achieving in a mainstream, they can have a diagnosis of ASD but we actually wanted to avoid saying that so we have listed behaviours that relate to social communication and sensory difficulties so we can get that group of children even if they have not got a diagnosis.

Amy commented:

Two are and four aren't on the spectrum.

8.2.5 Measures and assessment (theme 5)

The three SALTs who were interviewed all responded to questions regarding how they would measure or assess social communication for the individuals to whom they offered intervention. A pattern emerged that all three interviewees had an eclectic approach to measuring social communication. No one specific tool was used and therapists acknowledged that they created their own checklists using a variety of sources to generate the specific check points. They all described an eclectic approach to their measurements and all their methods were informal, for example, they relied on staff expressing concerns, anecdotal information and observation. Amy described her model of intervention as assessment in itself. She also stated that the special needs coordinator in the school identified which pupils should attend the group based on staff concerns. Amy's perception

is that these initial staff concerns contributed to the assessment even though they were not formally recorded**:**

We ask for informal information from teachers, like 'What are your concerns?

The data from the three semi-structured interviews suggests that for these therapists there is very little assessment carried out prior to placing children into an intervention group. For example, Julie said:

Well it is very informal really, it's based on the fact that we spend a lot of time with the children, we're familiar with the children and there are a few planning meetings, it just comes from what we know of the children.

Pam commented that:

It tends to be observation and also anecdotal stuff that I pick up in the staff room.

All three therapists reported that they compile checklists by incorporating questions from a number of different resources:

A profile is something that we really develop as we go along.

We've tried using checklists, we have tried using various things, and we have kind of, at the end decided well it's not really told us anything that we didn't actually already know, and it took time to do and they're long winded, and we do just tend to go off our own personal knowledge of the children.

Pam used formal standardised assessments to contribute to a social communication profile. The British Picture Vocabulary Scales (Dunn, Dunn & Whetton, 1997) and the Clinical Evaluation of Language Fundamentals (Secord, Semel & Wiig, 2006) were given as examples. These assessments look at linguistic skills, for example, comprehension of single words, following concepts and directions, repeating sentences, formulating sentences, word definition, and word classes. The fact that Pam identified these linguistic skills as part of her assessment of social communication illuminates the theme that emerged from the literature regarding the complexity in defining social communication. It reinforces the concept that certain domains can be combined to create a profile of social

communication and these include linguistic skills as well as pre-verbal skills, conversation skills, the atypical use of skills, behavioural and emotional responses.

8.2.6   Intervention models (theme 6)

Each interviewee described their specific model of intervention.   All three therapists explained that it was delivered in a group; however each of them went on to explain how the groups were formed, the location of the group, the format that their groups took and who was responsible for leading or delivering the group. They then described the nature of the intervention in terms of a general approach, for example, a functional approach, an integrated approach or an informal approach. Each interviewee emphasised the need for additional staff support in order for the intervention model to be successful.   However, none of them provided concrete examples of what would increase success nor did they define what they meant by success.

How each intervention group was formed varies. Amy and Julie detailed how the group was already formed and was effectively "given" to them. Amy, who works with secondary school age children, described how her group was compiled of young people about whom school staff had concerns.   Amy was asked to address these social communication concerns. Julie, who runs an intervention group within a primary school, described how the group already existed when she arrived to work at the school. It was handed to her and she was expected to add her input to it. Julie describes how:

> *The language group was already up and running ....so I took this group on and I didn't like it, I didn't enjoy doing it, the children didn't enjoy it, the staff didn't enjoy doing it, so the changes came about from the fact that I was unhappy with what I was doing. I didn't understand what I was doing because I'd just taken it on from somebody.*

Pam, who works in a special school, explained how she runs several groups. One or two of them are organised according to classes and the others she forms from combining children from across classes according to need (based on her professional opinion). None of the groups described have definitive admission criteria and the cognitive levels of the group participants can vary. However, Pam stated that:

I have worked with quite diverse cognitive levels but it works better if you have broadly similar cognitive levels.

Julie described the social communication needs of the children in her intervention group as being global rather than specific. Some of the children within her group may be working on social communication skills that they are already able to use. This is because of the way that the group is formed. Julie explained:

They are more global……we kind of look at a fairly broad topic, and we can be looking at something a little bit different within that for each child, for example, the 'working together' that we are doing at the moment, we've got one or two children that are very very capable of taking that kind of team leadership role really, and other children where we're very very much trying to get them just to keep bums on the seats and stay in the group.

Pam and Amy both commented upon the location where their intervention group takes place. Pam mentioned that there are some social communication groups run in the care setting within the residential school where she works. These are conducted out of school hours and are run by the Head of Care following discussions with the SALT. Amy, who works in a mainstream secondary school, stated that her intervention group is hosted within the mainstream school but in a newly developed centre for students' health and wellbeing. This is an open house to the students and is perceived as a positive place.

Discussing the way that the intervention groups are formed and where the groups take place led two of the interviewees to describe the format of their intervention. Julie carries out a weekly intervention group that lasts for an hour a week. This is carried out during term time for the duration of the child's time in the class. The group focuses on various topics over a two year cycle and each topic lasts approximately a term. These topics are not social communication specific but are educational topics; the social communication topics are drawn out to relate to the educational topic. The following quote explains this:

The topic lasts a whole term, so the topic this term is growth, which feeds through all the lessons that the children do….and we found that the things that we tended to be working on, and going off the literature as well, the social areas that we pulled out were things like, I'm trying to remember off the top of my head, working together….listening skills, imitation skills…erm my mind has gone blank.

Amy described how she has organised the group to receive a six week block of intervention with the group taking place every week. The group members are given a task each week to complete between sessions.

The age range of the group members is determined by the setting, for example, the group in the primary school has an age range of five to seven years. The age of the pupils in a group has an impact on the format of the group in terms of how much weighting is given to discussion compared to games and practical activities.

Amy stated that she as the SALT runs the group and that a specialist teacher, who is part of the advisory team for children with communication difficulties, supports her. When asked if she felt that the group needed to be led by the SALT she responded:

> *Absolutely! Even the advisory teacher with me was unaware of the things that we were covering.*

All three therapists have responsibility for the intervention groups in terms of planning, implementation and evaluation. They believed that they should have the key role. They indicated that the SALT has the most appropriate skills to lead the groups but that the support of other staff is important to ensure that their intervention is most successful. Julie and Amy both commented that although the support of other staff is very important it is not always happening consistently. Amy said:

> *I think there is room for improvement in how we actually deliver it and continuing to deliver it, like staff to support carryover.*

Julie commented that:

> *We have done a lot of training in the school in things like vocabulary, and we have tried to work with them to set up key words, and it has filtered a little but not as far as we'd want. So they understand our model is not being just given programmes although they still request them.*

All three interviewees described the approach that they adopt for their intervention and how their interventions are believed to have evolved and developed. Pam described her approach as being very informal and guided by what works for those group members, she said:

> *So over the five years the sorts of groups delivered have evolved and changed, and have become more specific.*

> *I think I put some conscious thought into it but in the end it just evolved. I think that in the end it just evolved by throwing a lot of things at the kids and what came back in working mode I carried on with and what took me down a blind alley I discarded. It was basically a suck and see approach.*

Amy and Julie referred to their approach as being or needing to be integrated into the overall educational curriculum. Amy said:

> *Amy:*   *I want whatever we do to be part of what's going on.*

> *Interviewer:*   *More integrated within the whole school?*

> *Amy:*   *Absolutely!*

Julie believes that:

> *The skills that we are working on within the group can also be supported in other areas.*

Two models described by the interviewees refer to the need for an increase in awareness. Pam emphasised the importance of increasing the awareness of the child's own social communication limitations and of increasing their awareness of the social communication skills used by others. She based this on the principle that without having self-awareness it is not possible to improve a skill. Pam said:

> *I am working from the assumption that in order to get a child with a social communication difficulty to function more effectively I need to teach them to be aware of themselves and others. I need to teach them to have some idea of more than one point of view.*

Julie stated that it is important for the wider staff group to be aware of the communication areas that are being worked on. If staff have more awareness of the specific skills that are being addressed then they will encourage the children to use those skills. Julie said:

> *I am not asking them to do any recording, but certainly it's just that everybody is aware.*

173

8.2.7 Types of intervention/ strategies used (theme 7)

The three therapists interviewed were asked specifically about the type of intervention and the strategies that they use within their model. Several areas emerged from the data relating to the types of intervention that they offer. As with assessment measures they all describe an eclectic approach which included social stories and comic strip conversations (Grey, 1998), The Social Use of Language Programme (Rinaldi, 2001), and Talkabout (Kelly, 1997). However, all three therapists indicated that they adapt these approaches and blend them with their own initiatives, supporting the account of models developing and evolving (8.2.6). Amy and Pam both work with older students and described their intervention as student-led. Amy and Julie both implemented their therapy within a group setting and Pam implemented both group and individual work in order to address social communication deficits. Pam identified that counselling should be a part of an intervention model, but she does not state if this is to be provided by her as a SALT or by another. Amy reflects explicitly on this eclecticism, stating that:

> *It depends on them. I pick and choose all sorts of things.*

All therapists indicated that in order to address the social communication needs of their children and young people they supplement group work with more specific individual interventions. Julie uses Social Stories to address specific social issues that children face on a daily basis. Pam does individual work with the older pupils to address specific, more complicated issues as they arise such as relationships and conflicts, arguing that they cannot be addressed within a group setting as intervention needs to relate to specific incidents. Pam also reported that when dealing with social communication it is likely that issues relating to self-esteem and self-image are uncovered, therefore counselling will be necessary alongside any intervention. Pam believes that:

> *If you are going to change someone's image, if you are going to reflect that in their self-esteem and change their core values then you have got to be careful how you do it and I actually mean a counselling qualification to do the job properly in the end.*

8.2.8 Factors that could impact on intervention (theme 8)

Therapists introduce many factors that could impact on intervention, some affecting how the intervention model evolved and others limiting the intervention model devised. Factors

include, time, theoretical knowledge, logistical implications, staffing and funding, professional confidence and circumstances; each of these factors will be considered.

Time available to the clinician influenced how the group was established. Amy's group runs for one hour a week for six weeks. She accepts that it is not possible to cover everything necessary in that timeframe; based on her professional judgement she will cover what she perceives to be the priority areas. If she had more time it is likely her intervention would improve as she explained that currently she has not got enough time to complete the background work that she feels is important, for example, structured baseline assessments. Although Amy did not state why she viewed this as important she felt it would help her to implement a better model of intervention when she said the following:

> *I can't cover everything that I would've chosen to cover with them, but we will have covered all the priority areas.*

> *I haven't got the luxury of the time to do all the background that you would want to do.*

Pam and Julie also commented that lack of time restricts what they would do and how they would conduct their intervention. Julie said:

> *When you have got limited time with children, especially if you are doing, you know, mainstream support services, you're in and out aren't you, you've not got time, and you see them in a very limited context.*

Pam said:

> *If I had more time I would do it better.*

Theoretical knowledge underpins intervention. All three interviewees demonstrated concern regarding their limited theoretical knowledge and felt that their intervention is not necessarily founded upon theory or an evidence base. Amy commented that:

> *The limitations of my intervention are first of all my own knowledge base which is still developing although I have to say that in the last year it has improved exponentially but there is always more you can do in terms of knowledge base. I think our knowledge base as a profession is still very weak. Much more weak than we would have ourselves know.*

Pam said:

> *I haven't gone to the literature, and in fact, well in one sense I have, in that I haven't found anything, and the only things I have found is that it's inconclusive as to whether these groups are helpful or not, but I haven't got a whole wodge of research things that will tell me that.*

Julie's conversation was as follows:

> *Interviewer:* *Is your intervention based on any theoretical knowledge or evidence base?*
>
> *Interviewee:* *It is now.*
>
> *Interviewer:* *OK. Since when? Where would you think that sort of...*
>
> *Interviewee:* *Over the last two years, because of my study. Definitely, it's not based on any one particular theoretical knowledge but it's certainly based on a much much greater, wider and deeper understanding of ASD and what you need to do to kind of respond to it.*

Logistical implications impact upon the development of intervention. Intervention is reliant upon individual therapists and the circumstances that they are in. Circumstances affect timing; sometimes the timescale for group work is imposed on therapists rather than it being of their choosing. This can impact on the intervention model that is put into place. Amy explained:

> *Ideally we actually wanted to do a week of intensive, but we couldn't timetable it. We didn't have seven weeks, we wanted seven afternoons, an hour. Not seven, it would've been five wouldn't it? But six seemed reasonable. I asked for that because I didn't want to commit us to anything more than that, not knowing where this group would go, and not having any commitment from the school that it was going to go into the school. And I also wanted just something that we could report back.*

For Julie staff training is vital in ensuring that her group sessions are understood and that skills are generalised. However, she finds that organising training and liaison is compromised by timetable constraints and staff availability. This may have an impact on the quality of the intervention. Julie said the following about staff training:

> *That's been a little bit ad hoc at the moment for various reasons, one of the reasons being I'm here on a Monday afternoon and all day Friday and it used to be that team meetings were on a Monday afternoon, they've been changed so I'm not here. That's being dealt with and I'm actually going to change my days from September*

to match so that I am here for the team meetings, because they're not staff meetings they are team meetings and they do, although there are kind of more managerial issues that are dealt with, but there are, we do deal with the behaviour management plans, planning IEPs, discussing any issues, planning people's time.

Certainly with the way the staffing is at the moment with, because we've expanded we've got a new classroom, and the teacher in charge is quite keen that staff work in both, so I'm working with different staff on Monday to the ones I'm working with on Friday, I'm working with one teacher on one day and a different teacher on Friday, and because I'm not attending the meetings at the moment I really really feel that I haven't got a clue about what's going on, and it's very very fragmented then, I'll be talking to one of the teaching assistants and find that we're both doing the same thing, but it always used to be when all the staff were kind of constant everybody knew what was going on and everybody was doing exactly the same thing, but with a lot of new staff that have needed, that haven't worked with ASD and Social Communication Disorder they're learning just how to manage everything on a day to day basis, so there is a huge impact at the moment I think in terms of training needs for those staff, and in terms of getting our act back to together, we did used to have it.

Accessing appropriately trained staff to support intervention is perceived as being crucial to its success. Funding impacts on staff recruitment and therefore has implications for the type of intervention that is put in place. The therapists interviewed commented on having good staff and good teams *"we've got a very good team", "I have to say we have a very good team that works very, very well, we have a mix of teaching assistants and teachers"* Sometimes, however, staffing is inconsistent or inaccessible. This indicates that some professionals do not want to get involved and that limited budgets dictate services and intervention. Pam stated that:

The limitation of my intervention has got to be staff, bottom line really.

Julie commented:

That is a weakness in the model because ideally I would always have the classroom staff with me.

Amy said:

Well yes, the not having other people from, not having a teacher from the school, not having a BIP person (Behaviour Improvement Person), not having the Educational Psychologist sitting there, so at least being involved in the planning.

We've alerted the Educational Psychologist and asked him to be involved, and he politely declined, said "it's very good" and "let me know how it goes". He said "I'm sure whatever you're doing will be fine", and I said "I want to check that these are the things you feel will be helpful". "I'm sure it will be fine" he said, "just let me know".

Professional confidence emerged as a theme in the focus group discussions and is illuminated in these semi-structured interviews when Pam said:

I think that the other thing that has affected me is the thought that everyone else may be doing it better than I am.

Pam also questioned her effectiveness and appeared to lack confidence in her professional judgements when she stated that:

I still don't think I am clear about when and where we are effective and what things we should leave alone.

The impact of this level of professional insecurity is unclear. Is this a question of professional inadequacy or openness to questioning?

The intervention offered by therapists is not always planned or organised. Pam explained that she views this as a weakness in her own intervention model.

I must have some underlying plan I have just never really thought what it is. I think to some extent I pick and choose….there isn't a clear curriculum it is another weakness of the model actually. But it will come….

8.2.9   Outcomes (theme 9)

In any intervention it is important that progress is measured and outcomes are recorded. In the interviews I asked each therapist questions specific to the outcome of their intervention model and how they measured outcomes. I also asked whether they believed that the intervention they described is beneficial. Two of the interviewees made specific reference to this when asked *"Do you feel that your intervention model has been beneficial?"*

Pam said:

> *I feel it has improved an awful lot. Definitely, it is still evolving, we are still working on it, there are definitely areas for improvement, and we will just kind of keep at it.*

Amy said:

> *Yes, although I think it's not been as beneficial to the children who we are going to look further at in terms of possible ASD.*

Although Amy described a self-rating method that gave her some measure of progress none of the interviewees were able to identify specific formal outcome measures that they had used. One interviewee admitted that *"It does need a proper look at how we are going to measure the effectiveness and the outcomes of it"*. The therapists describe informal methods of measuring progress:

> *But I certainly haven't actually measured the effectiveness in a truly structured way.*

> *We could have done a questionnaire from staff at the beginning, but we just took their concern; that they were concerned about these children's social interactions.*

Julie, who works within the primary school, discussed how she has recently introduced a system which looks at rating key skills, called Performance Indicators for Value Added Target setting (PIVAT scores, Lancashire County Council). This was not specific to her intervention but did provide some evidence of progress when looking at the topic 'all about me'.

Amy referred specifically to self-evaluation as a way of evaluating the success of the group intervention. She used a tick list to find out if the individual group members felt that they had achieved objectives. The students in the group go through the checklist together and each individual will mark their own evaluations, in confidence. They complete objective checklists together in the group rather than individually due to time constraints. Amy commented that this approach was a conscious decision to move away from finding an appropriate assessment measure:

I've had quite a change in philosophy recently. I've come round, I've been very much of the opinion in the past that if I looked outside for the best research, the best programmes, and I worked as hard as I could and did everything to the nth degree, somehow the clients would benefit, and for this group it's actually reflective of my decision to stop doing that.

Interviewer: Why?

To go in there and look from the clients' point of view, actually what is it they're looking for? So, some of the outcomes will come from the end of the group.

As well as self-evaluation the therapists emphasised the importance of staff evaluation and feedback. They use this as a measure of outcome or more specifically as a measure of how well the children/young people have generalised skills. Two of the interviewees commented specifically on feedback. Pam said:

They'll come to me and say 'Oh guess what such a body did during the week' and it will have some relevance to what we've been doing in the language group so you can kind of see the improvement and the progress.

Amy's conversation referred to feedback from staff:

Interviewee: We're going to ask staff via the SENCO. The staff who referred the children.

Interviewer: Would you ask them?

Interviewee: I mean we could do it by a form. I don't know, I haven't thought that far yet.

8.2.10 Possible factors that influence outcomes (theme 10)

Analysis of the data demonstrates that there are specific factors that may influence outcomes. Time was mentioned as a factor that prevented initial assessment taking place which therefore meant that reassessment to measure progress was impossible. When asked, *"Was there any other assessment that you did for social communication, any baseline assessment?"* Amy commented:

We didn't, because we've literally got a six week period.

Amy described how the group is a learning process for her as a therapist and that it is not structured enough to allow the measurement of progress to take place. She set up the group in order to find out what was necessary for future groups. Amy said:

> *I wanted to provide something that would be of value and enjoyment to the children, but I had to find out what things we need to be doing in that school.*

Amy stated that running the group provided her with a lot more knowledge than she had before she started out, but the knowledge was limited to within the context of that specific group. Nothing had been put in place to take into consideration the generalisation of skills and therefore the true benefit of the intervention group could not be measured. Amy said:

> *It's given me a lot more information than I've had before, but only within the group. So for me there's 'out there' to look at. It's been beneficial to the pupils because they've been telling me it's beneficial, and they're grading it with ticks on their badges as to how beneficial it is.*

Pam referred to the fact that the outcome of her intervention is not measured because there were no specific targets set at the outset of the intervention. She stated:

> *I think that is probably does need some more target setting, it probably does need some more specific target setting. And that is something that I am working on at the moment.*

The data suggests that the therapists believe that in order to measure progress and collate outcome measures it is necessary either to have a very structured intervention model or to have a system that uses narratives and observations to demonstrate progress. As described earlier, the three therapists interviewed explained that their intervention models have evolved and developed. All three models described by the therapists can be considered informal and lacking structure. Informal and evolving sessions are the therapists' conceptualisation of what they do. Pam described how she would like a specific model to base her model on; she feels that this would improve her intervention. Pam said:

> *There are masses of room for improvement. The first thing is that I have yet to really find a really good and detailed model of when these social skills develop and how. So in actual fact half the time you are making assumptions that a child should be doing this at X stage but you don't actually know. I have never actually seen it profiled against other skills.*

A lack of collaboration between professionals was seen as having a significant impact on the outcome of an intervention. Amy described this in her school. It can be interpreted that as social communication does not improve when worked on in isolation it is important that collaboration takes place in order to improve outcomes. The themes connected to outcomes link closely to the theme of generalisation. Amy said:

> *I didn't want it to go on longer being in an isolated group. At this stage we need to look at what's happened, what we've learnt from it, and check that there are possibilities to move it on, and if there aren't I won't repeat it because I don't think there's any point.*

For those therapists working in schools, contact with parents can be limited, and the lack of parental involvement could impact on the successful outcome of intervention. Pam commented that:

> *Parents know that they can contact me at any time, most of them don't. We do run a parent support group but to be perfectly honest with you it has been very poorly attended.*

The therapists identify that certain factors can influence outcomes. They acknowledge that limitations in their intervention restrict the ability to measure progress. It may be that their intervention has positive results but that outcomes are not being measured due to time restrictions, a lack structure and a lack of target setting. The ability to generalise social communication skills is perceived to be a positive outcome of intervention. Therefore, specific aspects that impact on generalisation will influence outcomes, for example, a lack of collaboration or limited parental involvement. This leads nicely into the next theme; the data provided more detail regarding how consideration was given to the generalisation of skills.

8.2.11 Generalisation of skills (theme 11)

All of the therapists interviewed were asked how they had given consideration to the generalisation of social communication skills within their intervention model. They acknowledged that it is something that they are very aware of and that intervention should incorporate generalisation. However, they also comment on how difficult it is to plan for

generalisation of skills to take place. Pam described an informal approach to generalisation:

> *The way that I try to look at generalisation and transference of skills is that I do talk to the classroom staff about what we are doing and sometimes some of it will go into an individual education plan (IEP), not always written down….because we have only got five teachers to deal with you can do a lot verbally.*

To facilitate the generalisation of skills, therapists recognise that intervention should be integrated into the classroom, care setting and home situations and yet this is not happening. They are aware that it is important but are unable to describe exactly how they incorporate targets to aid generalisation. Pam stated:

> *I think that for intervention to be improved it has got to be much more closely tied into the classroom and the care setting and also the home setting. So that generalisation and transference is clearly there.*

Amy stated:

> *It's more of a philosophy in schools, and I always include the parents in that, actually that's another thing, we didn't include parents in this intervention!*

Amy acknowledged that supporting the generalisation of skills was given some consideration by ensuring that a support assistant was involved in the group work; however only by being asked the question in the interview was she able to reflect and consider what she would do in the future to support the generalisation of skills within her intervention model. Amy responded:

> *That was the reason for bringing the Special Support Assistant in. She is somebody who works with them. What we would be looking to is getting targets into their Individual Education Plan (IEP) because at the minute there's still work on the IEP basis. So it would be very easy, and in fact some of these children have got social targets on their IEP, but not in consultation with us. So we would be looking at working with the Special Educational Needs Coordinator (SENCO) to get perhaps a more appropriate target into the IEP which would then be evaluated, but we would have to ask for those evaluations to be made known to us, because that would happen as a matter of course in the school, but wouldn't always be fed back to us.*

Julie explained how she thinks that it is very important for children to be able to generalise the skills that they have learnt in the group. She stated that she actually challenged what she was doing in the group on the basis that she did not feel that generalisation was occurring. She has tried to include strategies to aid generalisation in her intervention model but she acknowledges that because her intervention is informal it is very difficult to achieve without structure. The following conversation demonstrated how Julie has struggled with the concept of generalisation:

Interviewer: *OK. Now you did mention a little bit there about generalisation and transference of skills, so is that something you've recently in the last couple of years tried to address?*

Julie: *Yes, it's something that I'm very very aware of, and it was one of the things I think that got me going with how the language group was set up itself, I actually took it over from one of the teachers who started it and I'm kind of doing these activities and thinking I don't actually know why I'm supposed to be teaching them with these activities, and I don't really, and if I don't know that how are they going to know that, how are they going to know what they've learned and what they can then do about this elsewhere? So that was something that kind of struck me quite early on and then as I've been involved more and more in post graduate study it's something that comes up... so that was something that I wanted to look at.*

Interviewer: *Right, so you've started, you're very aware of it, you've started to think about it, and you've started to put some little things in place. So what were those, you did mention things before to help with generalisation.*

Julie: *..the whole idea is if the staff know what the goals are in the group, what the term topic is all about and what sort of things that they can do and say to support skills across both, across all the areas... and then specific ideas for supporting generalisation, so things that, phrases that could be said or used or activities that could maybe be used to make reference to what they'd done in the language group, and certain activities from the general classroom were pulled out and brought into the language group as well to make them realise that you don't only do this song in singing and you don't only do this game in topic work, it all kind of inter-relates. And they were asked to record each week one example for each child, where they tried to support generalisation.*

8.3 Summary

The semi-structured interviews were conducted with SALTs who were implementing intervention that focused on social communication skills. The three interviews reinforced the concepts that SALTs are struggling to define social communication, they are finding it difficult to understand how social communication fits within a theoretical framework or developmental model and how best to intervene with regard to assessment, intervention and outcomes within the area of social communication. The data highlights that SALTs are using the term 'social communication' and they are drawing on their experience to make an intervention that is flexible enough to meet the varied needs of individuals who are perceived to have social communication difficulties. It was expected that during the interviews the therapists would reflect on their practice. In doing so they outlined their approach, analysed their knowledge base and reflected on the appropriateness and the limitations of their intervention models. They described what factors impacted or influenced their decisions and what they perceive could be done to improve the intervention that they implement.

9   Chapter Nine – Discussion

9.1   Introduction

Chapters 5, 6, 7, and 8 have presented the findings from four data sets. This chapter will discuss and integrate all the findings from the data collected. It will also include the following:

- The limitations of the study
- How this enquiry makes an original contribution to knowledge and the implications for practice
- Ideas for future research.

From the outset the aims of my study were grounded in the context of clinical practice. The project developed from the desire to ensure that my own clinical work was underpinned by an appropriate evidence base (Sackett et al., 2000). The interpretation of good evidence based practice is that there are three pillars: clinical expertise, patient values and expectations, and best available clinical evidence from systematic research. At the time of embarking on this study I believed that, in my own clinical work, in the context of special educational provision, I had two of the three pillars standing on firm foundations (clinical expertise and patient values and expectations) but I had not yet begun explicitly to build the third pillar (best available clinical evidence). This research project was implemented in order to begin to build or explore the less well defined pillar, to enable me to apply the best available clinical evidence. To do so I needed to lay the foundations by making sense of the phenomenon 'social communication'. By trying to make sense of social communication many themes emerged to create a conceptual framework; these themes illuminated my original questions. Where does the term 'social communication' come from? What does it mean? Is it equivalent to the term pragmatics? What do professionals do to address such issues? Do all children with social communication deficits respond and improve with intervention, and if so, what intervention? In turn these questions reinforced the complexity of the phenomenon and the need to explore social communication in the clinical and educational setting.

Multiple methods of data collection generated raw data. This was manipulated through a process of conceptualisation in order to make sense of the information in terms of themes. This chapter aims to discuss the findings from all the data collected; the themes from the

different data have been synthesised to enable ideas and conclusions to form the discussion. To structure this chapter it is necessary to outline the themes that have emerged from the data, demonstrating the source of each theme and how the themes interlink across data collection methods. Table 32 documents this information:

Table 32 - Identified themes that are matched to the data sets

Subsection Theme	Themes	Literature synthesis	Pilot study	Questionnaire	Focus group	Interviews
Terminology	A definition of social communication	✓	✓	✓	✓	
	A definition of pragmatics	✓			✓	
	The use of terminology	✓	✓		✓	✓
	Preference of terminology	✓	✓			
	Defining social communication is complicated	✓	✓			✓
	Models of language development	✓				
Aetiological considerations	Aetiology/underlying causes	✓			✓	✓
	Factors that may influence social communication				✓	
	Autism linked to social communication	✓			✓	✓
	Understanding the primary issue				✓	
Assessment, intervention and outcome factors	Measures/assessment	✓				✓
	Types of intervention/strategies used	✓			✓	✓
	Intervention models	✓			✓	✓
	Factors that could impact on intervention			✓	✓	✓
	Outcomes	✓		✓	✓	✓
	Possible influencing factors on outcomes			✓	✓	✓
	Facilitating the generalisation of skills				✓	✓

To discuss and integrate the findings from all the data collected, this chapter will be structured in sub-sections. Each sub-section has related themes; I have collapsed the seventeen themes into appropriate sub-section themes for the purpose of discussion. Even though I have separated out each theme to aid discussion and compartmentalisation it is significant that all the themes overlap. There is interconnectivity, for example, autism is a topic that threads through all themes. I aim to highlight this interconnectivity as I work through the discussion.

9.2   Discussion

9.2.1   Terminology

As outlined in the introduction to this study, several questions evolved from a consideration of social communication within educational and clinical settings. Some questions related to defining social communication as a term; for example, where does the term 'social communication' come from? What does it mean? Is it equivalent to the term pragmatics? Is it possible to define, describe or profile social communication? Where does social communication fit within models of language/communication development? This discussion will integrate the findings from all the data (Chapter 4 section 4.3.1; Chapter 5 section 5.2; Chapter 6 section 6.2; Chapter 7 section 7.2.1; Chapter 8 sections 8.2.1 and 8.2.2), bearing these questions in mind. Information from all data sets indicates that social communication is a term that is being used within the profession of Speech and Language Therapy and also across a wider forum. The questionnaire data demonstrates that there is variation between SALTs, EPs and teachers regarding the percentage of their caseload that have social communication deficits. This may be influenced by the setting in which they work. All of the teachers in the survey work in special schools whereas the EPs and SALTs work in a variety of environments, for example, clinics and mainstream schools. Also these opinions are perceptions and are dependent upon the individual's interpretation of the term 'social communication'. Despite the variation, it is clear that within the clinical and educational context, professionals are working with a large proportion of children who they perceive to have social communication deficits.

9.3.1.1 Interchangeable Terminology

Data from the pilot study (as demonstrated in Chapter 5 section 5.2.3) and the literature synthesis (Chapter 4 section 4.3.1.1) indicated that terminology is used interchangeably.

The three terms identified by the pilot study participants are, 'social communication', 'use of language' and 'pragmatics'. All three terms are also referred to in the literature, although social communication and pragmatics are more prevalent. The pilot study data suggests that SALTs perceive that the term 'social communication' is emerging as an alternative to the term pragmatics. They feel that pragmatics is seen as an academic term, which is more formal in style. SALTs indicate that pragmatics, in a similar way to social communication, is made up of specific elements but that it is a more linguistic based term. The pilot study identified that three of the four SALT participants preferred to use the term 'social communication'. They also felt that the term pragmatics was less likely to be used by people outside the SALT profession. This is reinforced by the content analysis of the definitions provided in the questionnaire (6.2). The word pragmatics is used five times by SALTs and only twice by EPs and not at all by teachers. Different professions have a tendency to use different types of descriptors within their definitions. This notion is supported by the focus group discussion (7.2.1) which suggests that the terms are similar in their definition and that SALTs perceive that the two are used interchangeably; the two terms have subtle differences in their meaning with some overlap. It was agreed by the participants that this interchangeable use of terminology is very confusing for parents. According to SALTs both of the terms 'social communication' and 'pragmatics' are used within the educational and clinical settings. In their experience social communication is the more favoured term.

The analysed data drawn from the literature supports the SALTs' perception that terminology is used interchangeably. Individual authors use a variety of different terms to describe the same set of parameters. Also terminology differs depending upon a specific diagnosis. There is a wealth of literature about autism, and many articles link social communication to autism. There is reference to a blurring of the boundaries by Gilmore et al. (2004) in relation to pragmatic impairment, social communication impairment and autistic spectrum. This overlap is further emphasised in the review of the diagnostic criteria for autism and the related paper by Gibson et al. (2013) that elucidates the overlapping symptomatology between PLI, SLI and autism. In both the pilot study focus group and the interviews, SALTs indicate that they perceive the increased use of the term 'social communication' to stem from the increase in the knowledge of autism. Social communication is identified as one of the three aspects in the triad of impairment (Wing & Gould 1979).

It can be concluded that all this interchangeable use of terminology confounds an accurate definition of exactly what is meant by the term 'social communication' in research and in the clinical setting. It seems likely this will impact on how professionals address the needs of those with communication difficulties and how they explain these difficulties to parents and carers.

9.3.1.2 Defining Social Communication

In the pilot study focus group the participants found defining social communication very difficult and failed to come to a clear consensus (5.2). On the whole there was agreement regarding the subject matter and what should be encompassed under the term. Despite therapists using pragmatics as an alternative term they feel that they do not use a specific definition of pragmatics to describe social communication.

This level of difficulty was apparent in the data from the questionnaires (6.2). SALTs, EPs and teachers were specifically asked what they mean by the term 'social communication' in the clinical and educational setting. The content analysis of these definitions highlights the multitude of different ways professionals define and describe the term. The most frequently used word within in a definition across professional groups is "understand". However, many other combinations emerge. Some words are specific to particular professions, for example, the words "conversation", "knowledge", "peers", "rules" and the phrase "tone of voice" are used frequently by SALTs but never by EPs or teachers. Some words are used more frequently by one profession than another, for example, "body language" is used by all three professional groups but less frequently by EPs than by SALTs and teachers. Some words are used frequently across all professions, for example, "interaction" and "aware" and so are the terms "verbal and non-verbal", "with others", "effective/effectively" and "facial expression". This suggests that these are key elements in describing the term 'social communication'.

The SALTs within the focus groups also found it very difficult to define the term 'social communication' without referring to the term pragmatics (7.2.1). They established key aspects or attributes that they would assign to the term 'social communication', for example, "sense of humour", "social understanding", "facial expression", "tone of voice",

"turn taking" and eye contact". They regard these as elements of social communication and one participant describes social communication as having sub-headings. The therapists believe that social communication is not clearly defined and that it is difficult to do so.

Evidence within the literature (4.3.1) supports the suggestion that both of the terms 'social communication' and 'pragmatics' are difficult to define and that there is commonality and divergence in both. Specific domains for social communication correlate with specific domains for pragmatics (Table 9). The models and frameworks identified in my literature synthesis show that the models evolve; there is a change over time that is mirrored with a change in terminology. The models to explain both pragmatics and social communication suggest that there is an overlapping of skills that are intertwined to produce an appropriate communication exchange.

The literature synthesis, pilot study, questionnaires and focus group data all highlight complexity in defining the term 'social communication'. The information in the pilot study regarding social communication being a wide topic with subheadings is reinforced by the social communication domains that can be identified from the literature (Table 9). The idea that social communication is an umbrella term to cover certain components matches the domains that are identified in the literature. The literature synthesis, pilot study, content analysis of questionnaire and the focus groups all indicate that, although it is difficult to find a definition of social communication, there are specific components that are encompassed under the term.

It is suggested by SALTs in both the pilot study and the focus groups that there is no clear developmental pattern of social communication. SALTs believe that there are developmental norms but that these are derived from personal experience. The pattern is complex and there are no definitive conclusions as to what the developmental pattern is. This is reflected in the literature and is specifically referred to by Adams (2002:975).

Findings in relation to initial questions

It is now possible to consider the questions "Where does the term 'social communication' come from?" and "Where does social communication fit within models of language/communication development?" The specific origin is unknown. Olswang et al.

(2001) and Adams (2005) have written two valuable papers with regard to developing a framework for social communication; however, various models or theories of language and pragmatics have contributed to the holistic framework of communication. The term 'social communication' has been used by various researchers and experts, for example, Wing and Gould (1979) in their paper introducing an autism spectrum and explaining the triad of impairment and Bishop (1998) in her development of the Children's Communication Checklist. However, the term did not appear in the models identified in my literature synthesis until Olswang et al. (2001). It is very difficult to accurately identify how social communication fits within the broader models of language and communication because the interchangeable use of terminology occurs within the models, frameworks and theories. Perhaps what started off as a simple model that contained the two key elements, semantics and pragmatics (Morris, 1938) developed into three aspects, content, form and use (Bloom & Lahey, 1978) and then further evolved into a more complex model of inter-related aspects. This more recent model could be described as having several components that mesh, synergise, interface or overlap to produce successful communication. How these aspects are labelled varies according to time, author, professional knowledge, experience and interpretation.

A visual representation of the discussions regarding terminology and defining social communication is included below:

Figure 21 - A conceptualisation of social communication

EFFECTIVE/FUNCTIONAL/APPROPRIATE

THE SKILLS

THE SETTING

SOCIAL COMMUNICATION DOMAINS

CONVERSATIONAL SKILLS
- Gauging the listener
- Structuring a conversation
- Responding
- Repairing
- Relevance
- Ending a conversation
- Topic initiation
- Topic changing
- Maintaining a conversation
- Turn taking
- Reciprocity
- Joint engagement
- Imitation
- Discriminating responses
- Joint referencing
- Appropriate comments/hierarchy
- Spontaneity
- Initiating a conversation
- Greetings

NON VERBAL SKILLS
- Eye contact
- Body language
- Gesture
- Listening
- Pointing
- Intonation/prosody
- Facial expression

EMOTIONAL UNDERSTANDING
- Empathy
- Emotional expression
- Regulating emotion

SOCIAL KNOWLEDGE
- Social rules
- Social boundaries
- Social blunders
- Social cognition
- Social inferences
- Manners

LINGUISTIC SKILLS
COMPREHENSION
- Processing language
- Interpreting meaning
- Moment to moment processing
- Language understanding
- Understanding negatives
- Sentence comprehension

EXPRESSION
- Narrative skills
- Sentence production
- Convey meaning
- Sentence formulation
- Multi-faceted use of language

HIGH LEVEL UNDERSTANDING
- Jokes
- Metaphor
- Interpretation
- Inference
- Irony
- Sarcasm
- Assumption

COMMUNICATION INTENT
- Messages
- Clarification
- Demands
- Express view/opinions
- Ask for help
- Request
- Negotiate
- Modify
- Resolve conflict
- Share ideas
- Socialise
- Explain thought

INTERPERSONAL
- Friendships
- Relationships
- Working with others

BLEND AND INTEGRATE

CONTEXT

THE COMMUNICATOR

SOCIAL INSIGHT

SELF AWARENESS

COGNITION

RECEPTIVE

COMMUNICATION

INTENT

EXPRESSIVE

THE SOCIAL SETTING

PEER GROUPS

SITUATIONAL UNDERSTANDING

RANGE OF SETTINGS/TRANSFERABLE SKILLS/ADAPTABLE

193

This piece of research takes a constructionist approach which means that as I am both clinician and researcher I am a significant part of that process. Making sense of the data is an active constructionist process and enables me to interpret the information. Given my engagement with the data it would be unrealistic to think that my own clinical experience had no bearing on it; however, I must emphasise that the above model is grounded in the data from the pilot study, literature, survey, and focus groups and is the conceptualisation of the term 'social communication' that I am proposing. By scrutinising the information from all data sets pertaining to defining social communication I was able to compile a comprehensive list of terms, labels, concepts and phrases that were used within the literature and by participants. I then ensured that all identified elements were included in the conceptualisation in Figure 21. I amalgamated the information from all data sets that related to defining social communication in order to produce a visual interpretation of the findings. As an evidenced based practice model has been adopted throughout this thesis it is important and legitimate to add the element of expert clinical opinion. Accordingly I have drawn on my clinical experience and knowledge in order to synthesis the data to develop a clear conceptualisation. There are two major components to successful social communication; these are 'The skills' and 'The setting'. An individual must have the skills and be able to use them in the setting. The communicator needs to have good cognition, social insight and self-awareness in order to apply these skills to social settings. They need to be able to give information (expressive skills) to their peers and receive information (receptive skills) from their peers. It is essential that there is 'communication intent' between the communicating parties; both need to be motivated and understand the purpose of their exchange in order for the communication to be 'social'. However, a complex set of skills is required in order to interact effectively; these skills emerged from the data. I have called these skills 'social communication domains' and organised them into groups. These include; conversational skills, linguistic skills, emotional understanding, non-verbal skills, social knowledge, interpersonal skills and communication intent. These domains need to be blended and integrated to ensure success. To be able to use these skills in the social setting it is essential that they are appropriate, functional and effective. The communicator must ensure that these social communication domains can be used in a range of settings, are transferable and can be adapted to any situation. For communication to be truly successful there has to be an excellent understanding of the context of the situation; ensuring that subtle nuance based elements of communication are interpreted.

9.2.2 Aetiological considerations

SALT participants in the focus groups and also those who consented to be interviewed raised issues connected to the underlying causes of social communication. These views were reinforced by the data that emerged from the literature synthesis (4.3.2).

Focus group data analysis (7.2.2.1) demonstrates that there are many factors that impact upon social communication; cultural issues, personality, familiarity and self-esteem all affect the way someone interacts. Participants also specify autism as a condition that has social communication as a core deficit; however, it is acknowledged that there are lots of non-autistic individuals who demonstrate similar deficits. Participants showed agreement that it is important to establish the underlying cause of a social communication difficulty but they emphasise that it is not always clear. It is suggested that it is very difficult to separate behaviour and communication. SALTs also indicate that it is hard to identify what comes first; does the behaviour cause there to be social communication difficulties or does the social communication difficulty cause the behaviour?

All three interviewees offer group intervention to children and young people in order to improve their social communication skills. In providing information about the individual members of their groups they infer underlying causes. The SALTs that were interviewed believe that it is difficult to establish the primary cause of an individual's social communication difficulties. Can an individual have social communication difficulties as their primary need or deficit (primarily social communication) whilst others have social communication difficulties resulting from other issues? To some extent the answer to this question can be found in the literature. The literature synthesis explored medical versus SALT diagnoses and the complex myriad of medical, linguistic and social-educational terminologies. A very recent study by Gibson et al. (2013) aimed to clarify the behavioural and linguistic profile associated with impairment of social communication outside of an autism diagnosis. Their findings support the proposal in the DSM-V for a distinction between autism and a non-autism 'social communication disorder' based on the presence or absence of restricted and repetitive behaviours/interests and a social disorder related to pragmatic language impairment. Information from the data explores the question, does primary social communication disorder exist or is it always a characteristic of some other diagnosis? Now that the new criteria have been implemented in DSM-V (May 2013) the answer to this question is yes, social communication disorder does now

exist in its own right. It is interesting to note that in the revised criteria of the DSM-V social (pragmatic) communication disorder is specified (see appendix 18). This reinforces the notion that the terms 'social communication' and 'pragmatics' are used synonymously as detailed in 9.3.1.1.

Although the interviewees described that they have treatment groups of mixed ability and differing social communication needs all three interviewees referred to children and young people in their groups as having an ASD. It was mentioned that a diagnostic team for autism was named "The Social Communication Assessment Team" and this directly associates the term 'social communication' with the ASD population. As there are children and young people with a diagnosis of ASD in the intervention groups described by each therapist there is an automatic link between social communication and ASD. Social communication is identified in a number of clinical fields and is especially prevalent in literature associated with autism (for example, Bolte et al., 2011; Charman, 2011; Jones & Schwartz, 2009). The literature indicates that it is the individual profiles that should inform the approach that is taken to support individuals with social communication or pragmatic deficits. The aetiology is not as important as the profile. Regardless of the disorder, heading or term used, it is of paramount importance that the profile is described, then it can be measured, intervention can be implemented, outcomes can be described and function can be considered.

The analysis of the data within the focus groups discussions (7.2.2) and the interviews (8.2.3) is reflected in the information that emerged from the literature synthesis (4.3.2). Together they give strength to the concept that social communication is difficult to define due to the diversity and range of causes. My own clinical practice and experience led me to hypothesise that there are three different types of social communication deficits: immature, atypical and those secondary to other issues. As discussed in section 4.3.2 of the literature synthesis it is not possible to categorise underlying causes into these three types due to the complexity and overlap of many social communication profiles.

Research studies, focus group data and information from the interviewees, therefore, all indicate that there are a number of aetiological considerations that can be attributed to individuals with social communication deficits. In all of the data sets ASD is identified as an underlying cause; however, there is strong evidence to show that some children have

identified pragmatic difficulties or social communication deficits that are due to other factors. It is too crude to categorise social communication as I had originally hypothesised as it does not take into account overlap, interconnections and possible anomalies. However, the data suggests that knowing the aetiology is important. It is probably the case that the aetiology of the social communication deficits will have some influence on a child or young person's sensitivity to the different types of intervention. This raises the question *"To what extent does the underlying aetiology of social communication deficits inform the type of intervention offered to children and young people?"*

The data suggests that social communication deficits arise from a number of different origins and as such the social communication profiles demonstrate considerable variation. This is something that therapists need to be aware of when considering treatment plans. My initial concept of there being three types of social communication profiles is over simplistic. However, the data demonstrates that there are a whole range of different types of social communication profiles and presentations, and therapists have identified these children on their caseload and have placed them in the same intervention groups. These can include children diagnosed as ASD, children with a stammer, children who are shy or who have social communication deficits with no identified origin.

Perhaps, the underlying cause is useful to the clinician but not as significant as accurately identifying the profile of social communication deficits. Regardless of a child's diagnosis, their profile of communication is unique and this profile should be identified by thorough assessment. Freeman et al. (2002) believe that regardless of the diagnostic category a considerable number of children and adults with, what they describe as social communication learning disability, require intervention. However, should the type or style of this intervention be the same for all social communication profiles?

Social communication deficits manifest in a multitude of different ways. This adds emphasis to the complex nature of the disorder. By considering the different manifestations of social communication deficits alongside the conceptualisation of the term 'social communication' (Figure 21), it is possible to describe the communication experiences that a specific individual may encounter. By drawing on the data regarding possible underlying causes of social communication deficits it allows speculation on

possible feature sets that can create the following profiles of individual children. These are outlined in Table 33.

Table 33 – Feature sets to create individual profiles

Atypical social communication	
Child A (diagnosis = autism)	Child A has limited social insight, self-awareness and cognition. No communication intent. He lacks awareness of the context or the situation. He has marked difficulties in all social communication domains. His ability to function is dominated by restricted interests and repetitive behaviours.
Child B (diagnosis = Asperger Syndrome)	Child B has above average cognition. She is self-aware but has limited social insight. She demonstrates a good use of most social communication domains but she finds it difficult to blend all skills. She has high level language impairment meaning that she misses the subtle nuance based elements. She has a limited ability to apply the skills that she does have to the social setting and is unaware of social context. Her behaviour is dominated by sensory processing dysfunction.
Child C (diagnosis = unknown)	Child C has average cognitive skills and self-awareness but limited social insight. Generally all of his social communication domains are intact; however he is unable to use them appropriately in the social setting. He is able to use the skills in a one to one setting. He is unaware of the situation and the context in a wider group. He is verbose. He displays no sensory issues or restricted repetitive behaviour.
Immature social communication	
Child D (diagnosis = global developmental delay)	Child D is limited in all aspects. Her social communication is immature compared to her chronological age but is commensurate with her cognitive ability.
Secondary social communication	
Child F (diagnosis = challenging behaviour)	Child F has average cognitive ability, social insight and self-awareness. He has good ability in all social communication domains with the exception of emotional regulation. He is able to use social communication domains in social settings and he understands the context. However, when his emotions are out of control this overrides his ability to put all his skills into use in any setting.
Child G (diagnosis = dysfluency/stammer)	Child G has average cognitive ability, social insight and self-awareness. She has good ability in all social communication domains and an excellent awareness of context. However, her dysfluent speech impacts on her ability to express herself and as a consequence she retreats from using her skills in social settings.

9.2.3 Assessment, Intervention and Outcomes

In Chapter 1, I explained how various questions arose during the exploration of social communication. Two of these questions "How are social communication skills measured?" and "What interventions are used and what are the outcomes of such interventions?" connect to themes that have emerged from the data related to assessment, intervention and outcomes. I will discuss how information merges across the data sets to explore these questions. The individual themes will be addressed in turn to aid readability, however, interaction of all the elements must not be forgotten in order to appreciate the complexity of the subject.

9.3.3.1 Assessment

Three of the five sets of data (literature synthesis, focus groups and interviews) showed the emergence of the theme 'assessment'. There is a wealth of information in the literature regarding assessment and measurement of pragmatics, with less information specifically related to social communication. As this research has identified that these terms are used synonymously, information regarding assessment of pragmatics is a valuable addition to the discussion. The data from the focus groups supported the information that emerged from the literature and was also reinforced by the themes that emerged from the semi structured interviews.

Types of assessments used

The synthesis of the literature highlights the complexity of the assessment process with regard to social communication (4.3.4). The literature supports the view that assessing both social communication and pragmatics is a complex process. Due to the nature of this aspect of communication many factors impact on the ability to measure a set of skills that are so reliant on context. No single measure is deemed adequate to analyse the realm of skill versus deficit that an individual may experience when communicating in different settings (Adams, 2002; Geurts & Embrechts, 2009; Adams & Lloyd, 2007; Olswang et al., 2010). A more specific 'tool-box' of assessment materials is essential to adequately profile social communication and/or pragmatics. According to the majority of authors this tool-box could include the following; published tests of pragmatics, published checklists (for example, CCC-2), formal language assessments (for example, ACE, CELF), coding systems, observation, elicitation, recording and filming. By using a combination of these

tools a clinician can develop a profile of an individual's strengths and difficulties within the area of social communication, and intervention approaches to address these deficits can be planned and subsequently implemented.

The concept of a multi-method approach to assessment of social communication is reinforced in both the focus groups and the semi-structured interviews. The focus group data produced five key assessment types: observation, self-reflection, reporting, checklists and informal conversations. Observation is identified as the key component to assessment; however, SALTs acknowledge that it is not easy and not always accurate. Therefore, observation must be accompanied by other methods of assessment. Reports from other sources supplement direct observation and with older children and adolescents it is important to talk to them about their own views, encouraging self-reflection. This can be complicated if the individual has limited self-awareness as it may not be possible to get an accurate reflection. As well as observation and self-reflection, participants indicate that checklists are a useful assessment tool for social communication but these should never be used as the sole method of assessment. Informal conversations can make a valuable contribution to the assessment process and can supplement direct observation. Participants believe that all observations are underpinned by professional judgement. The conclusion that can be drawn from the focus group data analysis regarding assessment and measurement is that there is no one single tool but different strategies can be used in order to measure or assess social communication. By doing this there will be a baseline that can be used against which to measure progress. These views reflect the findings in the literature.

The three interviewees outlined their specific approaches. They explained in more detail how they put assessment tools into practice. A pattern emerged that all three adopt an eclectic approach to measuring social communication. No one specific method was used and the therapists acknowledge that they created their own checklists using a variety of sources to generate specific criteria. All three therapists report that they compile checklists by incorporating questions from a number of different resources. However, they all indicate that they carry out very little assessment prior to placing children into their intervention groups. One therapist refers to formal standardised assessments to contribute to a social communication profile; the BPVS and the CELF were given as examples. These assessments look at linguistic skills, for example, comprehension of single words,

following concepts and directions, repeating sentences, formulating sentences, word definition, and word classes.

Drawing on the data it would seem that the recommendations for assessment of social communication outlined within research papers are being implemented within the context of clinical practice. The practising clinician demonstrates an awareness of how complex social communication is to assess and as a consequence uses his or her professional judgement to select the best possible assessment tools to create a battery of assessments. It will be discussed later how logistical implications affect the therapists' opportunity to implement an effective assessment process. The variety of methods described in the literature may be unrealistic to the 'jobbing' clinician, although the therapists interviewed do indicate that in an ideal world more assessment would take place.

Complexity in assessing social communication

One of the complexities of trying to assess social communication is the fact that so much emphasis needs to be given to observation and checklists, both of which can be subjective (focus group findings 7.2.4.1). Participants in the focus groups raised subjectivity and suggested that by using as many tools and sources as possible, a less subjective profile of a child's social communication skills can be developed. This is reinforced by the interviewees who all describe their methods as informal, for example, they relied on staff expressing concerns, anecdotal information and observation.

Carrying out multiple modes of assessment is time consuming and this is described by the SALTs in the focus group. Observation takes time and needs to be carried out in a number of settings with a variety of different people in order to produce a clear picture. Similarly, using checklists is described as being useful but time consuming. The information that emerged from the literature supports this; it is of paramount importance that data regarding social communication is collected from a number of sources, in a variety of settings over an appropriate period to enable all subtle and nuance based variations to be identified (Geurts & Embrechts, 2009).

Assessing social communication is further complicated by the need to rely on professional judgement. SALTs in the focus groups believe that decisions regarding social communication success are founded on professional judgements. In the literature it was
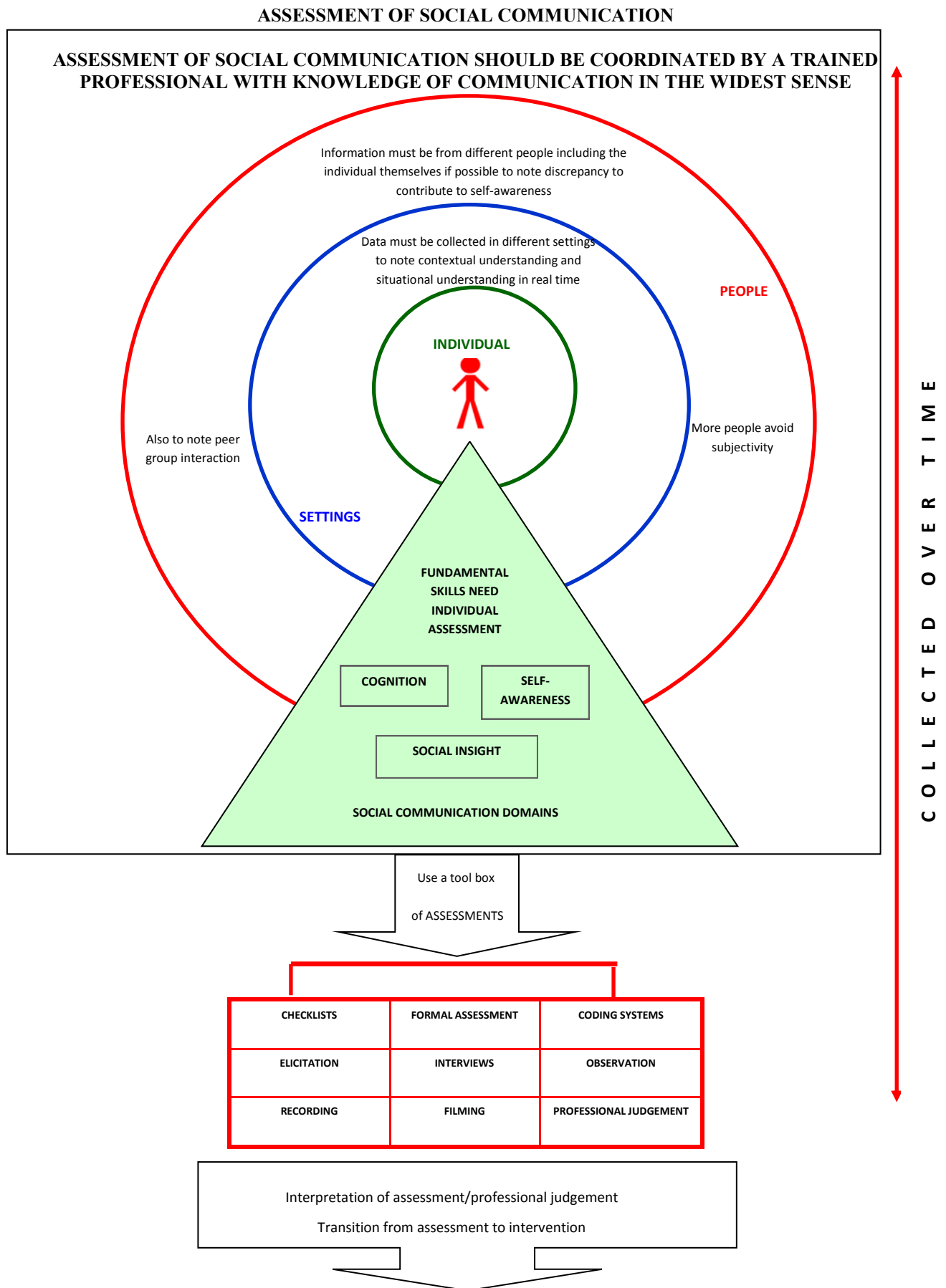
noted that professional judgement is necessary in order to select appropriate assessment tools and that a more specific tool-box of assessment materials is essential to adequately profile social communication and/or pragmatics (Adams, 2002). This research did not address the question "What is professional judgement?" It is important though to comment on the significance that this aspect has on moving from assessment to intervention. It is likely that any professional can follow a manual to assess but that it is the interpretation of that assessment data that is vital in the process. Professional judgement is a sophisticated process; it requires an internal heuristic that has developed over a clinician's practising career. It includes experience, reading and integrating the research literature and adding own thoughts and it is the combination of practical experience and theoretical knowledge. As therapists become skilled practitioners it is possible to internalise and build up a rich interconnected heuristic which allows them to make sense of incoming information without having to calculate and analyse in as much detail as a less experienced clinician. In this research study, when considering assessment and intervention, I am expecting the participants to use their professional judgement to reflect on their practice and explain what they believe they do in order to address the needs of children and young people with social communication deficits. Professional judgement is essential to any process of assessment and intervention and reinforces the information that emerged from the data that indicates that the SALT is an important component in the assessment of social communication.

If I amalgamate the information from the analysis of the different data sets with the conceptualisation of social communication (Figure 21) then a model of assessment (Figure 22) can be created. This model is grounded in the data and reflects the findings of this study. As the literature suggests, assessing social communication in detail requires information to be collected over a considerable period of time. The coordination of an assessment must be by a professional who has the knowledge of communication in the widest sense, for example, a Speech and Language Therapist (focus group data, 7.2.4.1). Analysis of the data indicates that there are three key components to assessment of social communication; the individual, the setting and other people. It is essential that information is collected from many different people who know the communicator well, including the individual themselves if possible. A discrepancy between self-evaluation and evaluations from others will contribute to assessing a person's self-awareness. The more people who provide information regarding a person's social communication the less subjective it is

likely to be. Information should be collected in different settings and situations; this will enable the assessment of an individual's ability to understand context and also to note peer interactions. Individual assessments need to be completed in order to assess specific skills that are fundamental to social communication. These are cognition, self-awareness and social insight. Although both self-awareness and social insight can be viewed as cognitive skills I feel that in relation to social communication they should be separate entities. Social communication is reliant on social insight and self-awareness. Some young people may have a high measured IQ or general cognitive ability and yet their ability to cope in social situations is the area of concern. Conversely a young person with limited cognitive ability may demonstrate good social communication skills. Assessing the individual's ability to use all social communication domains is essential.

Figure 22 - A model to demonstrate the assessment process for social communication

ASSESSMENT OF SOCIAL COMMUNICATION

ASSESSMENT OF SOCIAL COMMUNICATION SHOULD BE COORDINATED BY A TRAINED PROFESSIONAL WITH KNOWLEDGE OF COMMUNICATION IN THE WIDEST SENSE

Information must be from different people including the individual themselves if possible to note discrepancy to contribute to self-awareness

Data must be collected in different settings to note contextual understanding and situational understanding in real time

INDIVIDUAL

PEOPLE

Also to note peer group interaction

More people avoid subjectivity

SETTINGS

FUNDAMENTAL SKILLS NEED INDIVIDUAL ASSESSMENT

COGNITION   SELF-AWARENESS

SOCIAL INSIGHT

SOCIAL COMMUNICATION DOMAINS

C O L L E C T E D   O V E R   T I M E

Use a tool box
of ASSESSMENTS

CHECKLISTS	FORMAL ASSESSMENT	CODING SYSTEMS
ELICITATION	INTERVIEWS	OBSERVATION
RECORDING	FILMING	PROFESSIONAL JUDGEMENT

Interpretation of assessment/professional judgement

Transition from assessment to intervention

204

This model is a visual representation of the assessment process. It highlights the necessity of collecting information from the individual themselves, the people who know him/her well and in different settings. In order to do so, an assortment of assessment methods should be chosen from an assessment tool-box. These methods can include: checklists, formal assessments, coding systems, elicitation, interviews, observation, recording, filming and professional judgement. An example of this process can be found in appendix 19.

9.3.3.2 Intervention and outcome

All but one of the sets of data provides information regarding intervention. Specific questions in the survey are reinforced by the themes that emerge from both the focus group and the semi-structured interviews. There are many research papers in the literature that investigate various intervention models and these add important data that interlinks the themes generated from the other data sets (Aldred et al., 2004; Adams, 2005; Whalen et al., 2006; Mancil et al., 2009; Devlin, 2009; Jones & Schwartz, 2009; Jahromi et al., 2009; Wainer & Ingersoll, 2011; Winner & Crooke, 2011). These connections will now be explored.

The survey established that all professions (SALTs, EPs and teachers) have a proportion of their caseload that experience social communication deficits. It also identified that professionals perceive there to be help available for children and young people with social communication deficits but that different professional groups have differing opinions regarding the extent of this help (Figure 10). There are possible reasons for these differences. Many EPs are employed within services to focus on assessment rather than intervention and therefore they may not be as involved with their caseload beyond assessment to find out that they have received support. The teachers involved in the survey are all from special schools so this setting is most likely to provide support compared to mainstream settings. As SALTs and EPs are the ones that are usually involved in the detailed assessment process of these individuals then they are most likely to identify the specific level of need. Therefore they have a greater awareness of what the needs are and whether the needs are met compared to teachers whose assessment is generally less detailed and less likely to identify specific need.

<u>Types of support/intervention</u>

In the survey, teachers identified that the type of support offered divides fairly equally between social communication group, individual programmes, advice and role modelling (role modelling is when an adult in the educational or clinical context actively models an appropriate social communication skill in order for the child or young person to witness the skill being used in an appropriate context). EPs indicate that individual programmes are the type of support that is most likely to be offered along with advice to others and although they identify that social communication groups are provided they believe that these are not offered as often as individual programmes and advice. EPs identify role modelling as the least likely support to be offered. SALTs indicate that they provide social communication groups, individual programmes, advice to others and role modelling. All three professional groups (EPs, teachers and SALTs) in the survey indicate that direct intervention is supported by advice to others (both written and verbal) and role modelling. The questionnaire data indicates that the support offered is an eclectic approach to intervention as multiple methods are implemented in order to address social communication needs. This eclectic approach is emphasized by the SALTs in the focus groups and the SALTs that were interviewed more specifically about their practice.

All of the SALTs within the focus groups offer intervention to a cohort of children and young people that they have identified as having social communication deficits. Most intervention is group based as communication is not seen as something that can be taught in isolation. This contrasts with the data collected by the questionnaires as all three professional groups indicated that in their experience individual programmes are carried out with children to support them with their social communication. The three SALTs that were interviewed all implement social communication groups; however, all therapists indicate that in order to address the social communication needs of their children and young people they supplement group work with more specific individual interventions. They may use Social Stories to address specific social issues that children face on a daily basis and individual work with the older pupils to address specific more complicated issues as they arise, such as relationships and conflicts.

Some of the focus group participants identify specific programmes for group work, for example, The Social Use of Language Programme (Rinaldi, 2001), and Circle Time, (www.circletime.co.uk). These types of intervention were described by participants to be

206

useful in certain scenarios with certain pupils. However, there is limited empirical evidence to demonstrate the effectiveness of social stories in the literature (Reynhout & Carter, 2006, 2009 and 2011). These same programmes were acknowledged by the interviewed SALTs in their eclectic approach; however, as in the focus group all three therapists also indicate that they adapt these approaches and blend them with their own initiatives.

Data from the focus group participants demonstrates that SALTs complement direct interventions with additional strategies. These include self-awareness, training and staff support as well as collaborative intervention. These strategies were also mentioned during the semi-structured interviews. Training and support to be offered into school is considered to be an important aspect of intervention. Focus group participants believe that training can be in the form of modelling rather than as a formal training session. This was also reflected by the SALTs during interviews; the wider staff group must be aware of the communication areas that are being worked on. They believe that if staff have more awareness of the specific skills that are being addressed then they will encourage the children to use them. Each interviewee emphasised the need for additional staff support in order for the intervention model to be successful. However, none of them provided concrete examples of what would increase success, nor did they define what they meant by success. Not only is direct intervention plus collaborative working perceived to be essential but consideration must also be given to the communication environment.

The eclectic approach to intervention that is identified in the questionnaire and the focus groups is evident in the clinical practice of the three therapists interviewed. All interviewees describe their approach as having evolved and developed. One interviewee describes her intervention as very informal and to be guided by what works for those group members. The other two interviewees refer to their approaches as needing to be integrated into the overall educational curriculum. One SALT reflects explicitly on this eclecticism, stating that it has evolved in order to meet the needs of particular groups.

The literature synthesis highlighted many types of intervention. It would seem that focusing therapeutic intervention on a specific aspect of communication can subsequently influence the development of social communication, for example, language processing (Adams, 2005), joint attention (Mancil et al., 2009) and the social mind (Winner &

Crooke, 2011). The majority of interventions outlined cannot be promoted as models to improve social communication *per se* as often the article is unclear regarding the meaning of this term. Thus the evidence base for intervention to remediate social communication and pragmatic deficits in individuals with or without autism is variable.

Who offers the support/intervention?

In the survey, participants were asked who they believed offered the various types of support, specifically, social communication groups, individual programmes, modelling and advice. Statistical analysis of the data concluded that there is significant agreement between the three professional groups regarding the professions that are most likely to provide support to children and young people with social communication difficulties. All three professional groups rank SALTs as providing the most support.

The data also suggests that there is perceived to be a lot of advice being given to parents and carers both verbally and in writing regarding social communication. Teachers perceive that a variety of professionals provide this advice. However, SALTs and EPs perceive that it is their own professions that give the most advice with SALTs indicating that they give considerably more advice than anyone else.

The conclusions drawn from the questionnaire data with regard to who delivers intervention and offers support to those with social communication deficits are reinforced in two other data sets, focus groups and interviews. In the focus group discussions SALTs emphasise the importance of collaborative working. There is a belief that when working with children and young people with social communication difficulties that collaborative working is vital. Collaborative working within the educational setting enables more knowledge-sharing regarding the communication skills of the child as the teacher and the teaching assistants have more time to get to know the child. Joint planning is seen as a positive model in the remediation of social communication difficulties. Good working links between professionals are thought to increase the opportunity to share terminology and promote a shared understanding of the issues connected to social communication. However, although collaborative working is considered as a good model of intervention the SALT participants explained that it is not always carried out effectively. They also believe that their profession is often perceived to be solely responsible for the remediation of social communication issues. One participant also stated that some teaching

professionals do not recognise that there is a communication difficulty if the child has adequate speech and language.

Although the SALT participants agreed that there should be more collaborative practice there was a consensus that SALTs have professional knowledge that underpins their decision making and as such makes them the most appropriate professional to carry out direct intervention with children and young people with social communication difficulties. Although SALT participants want cohesive professional thinking and collaborative practice they believe that they are the most experienced and appropriately skilled professionals to intervene. This opinion is reflected in the semi-structured interview data. The selection process for interview involved SALTs from the focus groups volunteering to be interviewed about their intervention model. By consenting to be interviewed the participants were obviously delivering intervention. However, the findings are very reflective of the data from both the questionnaire and the focus group sets. One interviewee stated that she runs the group and that a specialist teacher, who is part of the advisory team for children with communication difficulties, supports her. When asked if she felt that the group needed to be led by the SALT she was sure that it did. All three therapists have responsibility for the intervention groups in terms of planning, implementation and evaluation. They believe that they should have the key role. They indicated that the SALT has the best skills to lead the groups but that the support of other staff is important. A comment was made that although the support of other staff is very important it is not always consistent.

Sufficiency and effectiveness of support/intervention

The survey data established that support is being provided. The three professional cohorts also indicated whether or not they believed that this support is sufficient. The data suggests that although professionals acknowledge that there is a variety of types of support available to children and young people with social communication deficits and their relatives, this support is not necessarily sufficient. SALTs and EPs have more doubt regarding the sufficiency of the support than teachers do (Figure 14). SALTs, teachers and EPs believe that whether the support for individuals with social communication deficits is sufficient is dependent upon two key factors; resources and the type of support offered. It also provided information about the effectiveness of the support offered. All but one of the teacher participants felt that social communication improves with the support provided.

However, a small majority of SALTs and EPs are unsure or feel that there is no improvement.

In considering improvement of social communication, SALTs and teachers believe that there are things that contribute to improvement being made, for example, consistency, group work and programmes, collaborative work, and systems. They feel that the evidence for improvement is provided by parental comments, professional opinions, observations and assessments.

Within the literature there is variability regarding the success of intervention and there are few empirical studies available. Richardson and Klecan-Aker (2000) reported thirteen years ago that there was very little data available on the effects of teaching pragmatic skills. They argued that clinicians must demonstrate the effectiveness of their treatment programmes. Three years on, Law et al. (2003) completed a systematic review of the evidence on the effectiveness of treatment programmes and it reveals that there is very limited high-quality research to support the effectiveness of developmental communication intervention. Adams et al. (2006) refer to earlier studies by Brinton and Fujiki (1995); Wilcox and Mogford-Bevan (1995); Adams (2001) and Letts and Reid (1994). These studies indicate that the remediation of pragmatics is successful but stress that the variation and nature of the effects are still unclear. Most recently Adams et al. (2012) evaluate the effectiveness of an intensive social communication intervention programme. Findings suggest that there are positive changes in children's communication skills.

What impacts on the sufficiency of the support/intervention affecting outcomes?
Survey findings indicate that SALTs, teachers and EPs believe that whether the support for individuals with social communication deficits is sufficient or not, is dependent upon two key factors; resources and the type of support offered. With regard to resources professionals note that time constraints, inadequate staffing and finances all impact on intervention. Professionals also suggest that the intervention techniques, level of experience of those delivering interventions and the level of collaboration with parents are all vital in ensuring that the support is adequate. These factors all impact on the sufficiency of provision and are replicated in three other data sets.

In the focus groups, part of the discussion revolved around the numerous factors that impact on interventions. These factors were also identified by the interview participants in their own clinical practice and some were recognised in the synthesis of the literature. Logistics is a key issue identified by SALT participants. Large caseloads and busy work schedules impact on the therapist's ability to offer the necessary intervention. Time constraints have an impact on all therapeutic interventions across all client groups; however, a discussion between therapists emphasised that intervention for individuals with social communication difficulties is more time consuming and complicated. They also believe that social communication deficits can go unnoticed by others and as such become a lower priority. It is implied by SALT participants that they are more likely to focus on offering intervention to children with more specific and quantifiable speech and language issues as these are perceived to be easier to measure in terms of the success.

Offering intervention can be constrained by the educational placement that a child accesses. Individuals in specialist provision are more likely to have peers with similar needs and, therefore, the therapist can organise intervention more easily and integrate it into the whole school curriculum. However, many individuals with social communication difficulties are in the mainstream setting and organising intervention for them is much more complicated. This was reflected in the data from the interviews when the therapists that were interviewed described how the formation of their intervention groups happened (8.2.6).

Limited resources, including time and staffing issues, provide logistical barriers to therapists in offering intervention; lack of resources affects the quality of the intervention and the capacity to account for the generalisation of skills. The focus group discussion indicated that circumstances impact upon decision making with regard to intervention. Intervention is often dependent upon educational placement and the type of intervention is often dictated by circumstance rather than being based on informed decisions. The SALTs who were interviewed raised the point that the time available to them influenced how the group was established (8.2.8). Circumstances affect timing and sometimes the timescale for group work is imposed on therapists rather than it being of their choosing. This restriction can impact on the intervention model offered. Time was mentioned as a factor that prevented initial assessment taking place which therefore means that reassessment to measure progress is impossible. The therapists interviewed explained that their

intervention models have evolved and developed and could be considered to be informal and lacking in structure. Informal and evolving sessions are the therapists' conceptualisation of what they do.

Staff training is perceived by the SALTs within the focus groups and those interviewed as important in ensuring that group sessions are understood and that skills are generalised. However, organising training and liaison is compromised by timetable constraints and staff availability. This may have an impact on the quality of the intervention. The SALTs interviewed stress the importance of accessing appropriately trained staff to support intervention. Funding impacts on staff recruitment and therefore has implications for the type of intervention that is put in place. Sometimes staffing is inconsistent or inaccessible and limited budgets dictate services and intervention. A lack of collaboration between professionals is identified within the interviews as having a significant impact on the outcome of an intervention. As social communication does not improve when worked on in isolation it is important that collaboration takes place in order to improve outcomes. For those therapists working in schools contact with parents can be limited and the lack of parental involvement could impact on the successful outcome of intervention.

During the focus groups, participants indicated that they doubt their ability with individuals with social communication difficulties compared to other speech and language issues. Therapists indicated that they lack confidence not only in the effectiveness of their intervention but also in the terminology that they are using and the evidence base for their models and interventions. It seems likely that this lack of confidence will impact on intervention. Similarly, in the interviews, professional confidence emerged as a theme (8.2.8). The impact of this level of professional insecurity is unclear. Is this a question of professional inadequacy or openness to questioning? Data suggests that SALTs have uncertainties regarding their ability in the area of social communication due to its complexity. The fact that they question what they are doing and explore a variety of approaches suggests that they are always adapting what they do to meet individual need. Openness to questioning enables therapists to adjust their intervention and engage in reflective practice. One could argue that this piece of research stems from my own professional insecurity; I have been so open to questioning that I have researched the area to seek answers to my questions. The level of professional doubt that emerged from the focus groups and the interviews did not emerge from the survey data. The data from the

questionnaires indicates that the SALTs are confident in their decisions and they specify that they provide support in many forms. They believe this support improves social communication skills (Table 17, Figure 13 and Figure 15). The differing conclusions generated by the different data sets reinforces my decision to use multiple methods of data collection; this issue regarding a lack in professional confidence is only revealed, in the closer questioning that was possible through focus groups and interviews.

Therapists within the three focus groups indicate that the delivery of their intervention to support children and young people with social communication is grounded in theory. However, their responses to questions regarding their theoretical knowledge are vague. There are assumptions that what they do is based on theoretical principles but none were able to provide any specific evidence base. During interview the three therapists disclosed their concerns regarding limited theoretical knowledge and that their intervention is not necessarily founded upon theory or an evidence base. This issue is identified in the literature, not specifically to the treatment of social communication but in Speech and Language Therapy *per se* (for example, McCurtin & Roddam, 2012).

Discussion about the appropriateness of teaching certain skills developed during the focus group. As well as considering the appropriateness and usefulness of teaching a skill, deciding which skill to work on, why and how often, all impact on the model and type of intervention. SALT participants acknowledge that it is difficult to know which skill to work on first. When a child is younger the therapist can decide the area of priority but when they are older the individual should be involved in deciding what to work on. This supports Bara et al.'s (1999) suggestion that no single theory details the emergence of pragmatic capability and as a result there is no protocol by which to assess the normal stages of pragmatic development. They believe that is not possible to study deficits in communication without a comparable basis in normal development. This is reinforced by Adams (2002) when she states that there are no definitive conclusions regarding a developmental pattern.

The literature also identifies that there are many factors that impact on successful intervention including, environment, context, nature of intervention and generalisation or transference. Adams (2005), Winner and Crooke (2011) and Jones and Schwartz (2009) appear to agree that individual social communication skills should not be taught in

isolation in the traditional sense but that other factors must be given consideration. These factors being, solution based support, dynamic and situational understanding, skills evolving from perceptions and thoughts, scaffolding of social situations and consideration of the social mind. All factors need to be underpinned by the reality that social communication happens in real time, with real people, in real situations and not as a set of isolated rules. Social communication is subtle, blends and varies across cultural boundaries and evolves and develops with age and experience.

Within the qualitative data elicited by the questionnaires, key factors were identified by professionals as limitations to improvement. For example, a professional's lack of knowledge or expertise, the fact that social communication is difficult to measure, the difficulty in generalising skills, the issue that more intervention is required and that even when intervention takes place, progress is slow. These key factors are recognised in other data sets including the focus groups (7.2.3.2; 7.2.4.2; 7.2.4.3) the interviews (8.2.8; 8.2.10) and the literature (4.3.4; 4.3.5; 4.3.6).

It emerged from the focus group data that measuring outcomes is not an easy process and participants comment on specific factors that influence any outcomes. A major factor that affects measures is the perceived subjectivity of the data collected. Within the literature it emerged that social communication varies depending on context and this impacts on measuring outcomes. According to information within the literature social communication is an undefined, complex, subtle, and variable skill. It is influenced by many external and internal factors such as expectations, prejudice, culture, personality, linguistic ability and cognition. This makes it a difficult set of skills to identify via assessment, remediate via intervention and measure for outcome purposes. Measuring outcomes is important to demonstrate progress and to justify the need for adequate resources. Olswang et al. (2001) reinforce this in several statements in their article referring to outcome measures for school-age children with social communication problems. Their following statements emphasise the complexity of the situation.

> *The treatments are sophisticated, because the problems are complex. Documenting change that results from these treatments is a challenge, due in part to the complexity of the problem.*

> (Olswang et al., 2001:51)

Measures must also be reasonable for clinicians to administer. This is a tall order, particularly as we consider the complexity of social-communication in school aged children.

(Olswang et al., 2001:53)

The challenge for clinicians is knowing which combination of behaviours in this complex compound are the most appropriate outcome measures for a specific child.

(Olswang et al., 2001:56)

The SALTs interviewed all acknowledge that limitations in their intervention restrict the ability to measure progress. It may be that their intervention has positive results but that outcomes are not being measured due to time restrictions, a lack of structure and a lack of target setting. The ability to generalise social communication skills is perceived to be a positive outcome of intervention. Therefore, specific aspects that impact on generalisation will influence outcomes, for example, a lack of collaboration or limited parental involvement.

In the literature synthesis I referred to Gresham et al.'s (2001) review which indicates that there are several reasons for the weak effect of social skills training; Gresham et al. argue that social skills training should be more frequent and intense than has occurred in most of the studies; social skills training must be specifically linked to the individual's social skill deficit; more consideration needs to be given to generalisation and maintenance of social skills.

Ways of measuring outcomes

Within the analysed data of both the literature synthesis and the interviews, outcome measures were identified. The SALTs describe informal methods of measuring progress and emphasise the importance of staff evaluation and feedback. They use this as a measure of how well the children/young people have generalised skills. Olswang et al. (2001) provide valuable information regarding the complexity of identifying outcome measures for social communication. They emphasise the importance of being specific in what is to be measured, how and where. They argue that the best information is likely to be gained from a variety of tasks, administered repeatedly and periodically. In their view clinicians must utilise both qualitative (descriptions from notes) and quantitative data (how often a

behaviour occurred) in order to obtain a comprehensive and theoretical understanding of social communication. It would appear that the level of measurement described by Olswang et al. (2001) is not being used by the practising clinician.

Evidence for improvement and a positive outcome

Conversations within the focus groups describe evidence for progress as vague and complicated. Therapists believe that progress is measured in terms of an overall impression of the individual's performance. It is complicated by the fact that there is not always a pattern of steady progress. Outcomes differ according to the underlying cause of the social communication deficit and some children do not make obvious progress.

Adams et al. (2006) comment that there is little systematic evidence regarding the benefits of SALT for children with pragmatic difficulties. There is limited evidence that changes in pragmatic behaviours are a result of specific intervention. They believe that there is little existing high quality evidence that would stand rigorous methodological scrutiny to support the concept that pragmatic ability can be improved with intervention.

Generalisation

The pilot study identified that social communication has to be functional and is dependent upon the context. It involves adapting to different situations and environments. This links to the importance of the generalisation of skills as identified in the themes within the questionnaire findings, the focus group findings, the semi-structured interview findings and the literature synthesis. Generalisation is the ability to transfer skills into real life situations and to use social communication to function across a range of settings. This is one of the most important factors when considering outcomes and is addressed in many research papers. The literature suggests that to enable accurate outcome measures there needs to be clarity on what is to be measured (Olswang, 2001; Adams et al. 2006). The challenge for anyone living or working with individuals described as having social communication deficits is how to support them in improving their social communication skills to enable them to function appropriately (or acceptably) in a variety of settings, situations and stages in their lives. A crucial consideration in the evaluation of an individual's progress is his or her ability to generalise cognitive potential into real-life situations. Often standardised instruments testing cognitive and language functioning are used to measure outcomes but these can differ from an individual's ability to use these

skills in everyday settings. Interacting with others and developing relationships are necessary in order to navigate the social world (Klin et al., 2007).

Gresham et al. (2001) interpret the outcomes of social skills training with individuals described as having significant deficits in cognitive, academic and emotional/behavioural functioning. Although this is not referring to social communication skills but to social competency there appears to be obvious overlap. Socially important outcomes make a difference in terms of an individual's ability to function, adapt to the environment and receive age appropriate acceptance. Social skills are the behaviours that an individual uses to perform a social task, for example, starting a conversation or giving a compliment. Social competence is an evaluative term based on judgements, for example how successful the individual is deemed to have performed during a social task.

The importance of generalisation is emphasised in the literature and yet there is data from both the focus groups and the interviews that SALTs do not account for this aspect within their clinical work. SALT participants in the focus groups agree that one of the biggest difficulties with regard to intervention and measuring outcomes is that of generalisation. There was debate regarding how effective group work is if it is delivered out of context for the child. When considering intervention models generalisation must be factored in to the programme in order to fully support these children and young people. SALT participants considered the possibility that children and young people may never be able to generalise the skill if they have limited self-awareness.

All of the therapists interviewed were asked how they had given consideration to the generalisation of social communication skills within their intervention model. They acknowledged that it is something that they are very aware of and that intervention should incorporate generalisation; however, they also comment that it difficult to plan for transference of skills to take place. Analysis indicates that therapists use an informal approach to generalisation, little is written down and most of it is achieved or addressed via liaison and passing on of verbal information. Therapists recognise the importance of facilitating the generalisation of skills and yet they are not putting systems in place to address it. Consideration is given to supporting the generalisation of skills by ensuring that other staff are involved in intervention. However only when a specific question was asked in the interview about generalisation did the therapists reflect and consider what they
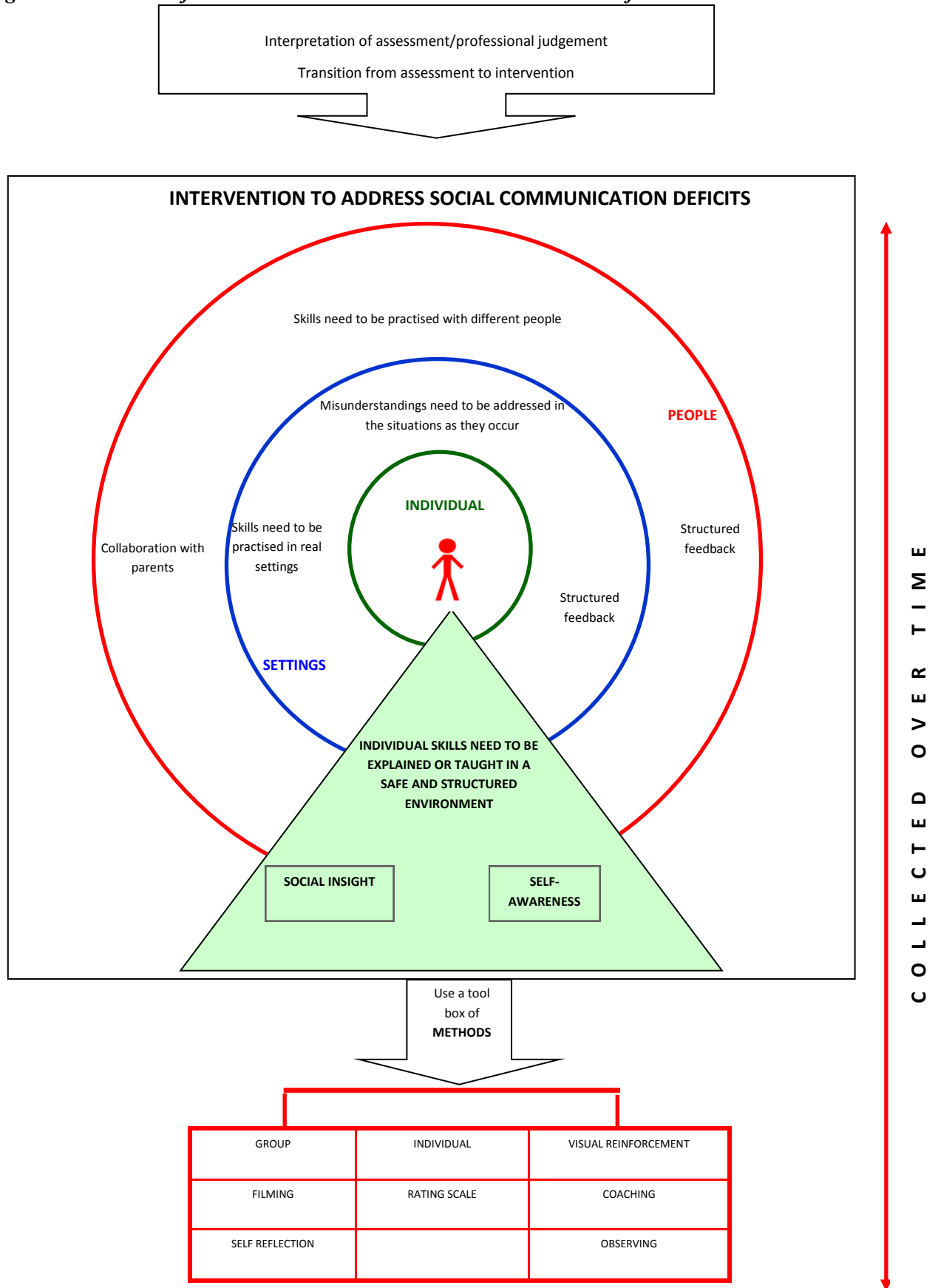
would do in the future. Nothing has been put in place by the SALTs in this study to take into consideration the generalisation of skills and therefore the true benefit of the intervention group is not measured.

Findings in relation to initial questions

It is now possible to consider the question "Do all children with social communication deficits respond and improve with intervention and if so what intervention?" Providing appropriate intervention is reliant on accurate and detailed assessment. If assessment is detailed then a profile of a child's social communication can be created. This profile identifies areas of deficit. Intervention must support the child to address the deficit but also the listener needs support to adapt their own communication style or the environment to support the child. By using the information that emerged from all data sets it has been possible to devise a model to conceptualise social communication (Figure 21) and a model to describe the assessment process for social communication (Figure 22). The same principles can be applied in order to generate an intervention model. Figure 23 demonstrates how intervention must reflect assessment.

Figure 23 - A model of intervention to address social communication deficits

Interpretation of assessment/professional judgement

Transition from assessment to intervention

INTERVENTION TO ADDRESS SOCIAL COMMUNICATION DEFICITS

Skills need to be practised with different people

Misunderstandings need to be addressed in the situations as they occur

PEOPLE

INDIVIDUAL

Skills need to be practised in real settings

Collaboration with parents

Structured feedback

Structured feedback

SETTINGS

INDIVIDUAL SKILLS NEED TO BE EXPLAINED OR TAUGHT IN A SAFE AND STRUCTURED ENVIRONMENT

| SOCIAL INSIGHT | SELF-AWARENESS |

COLLECTED OVER TIME

Use a tool box of **METHODS**

GROUP	INDIVIDUAL	VISUAL REINFORCEMENT
FILMING	RATING SCALE	COACHING
SELF REFLECTION		OBSERVING

Information from the literature (4.3.5.2), focus groups (7.2.3.2) and interviews (8.2.6) highlights that the intervention should be coordinated by a SALT. Specific skills need to be explained, taught and practised with the child in a safe and structured environment. The child needs to be made aware of how these skills are used by others. She or he then needs opportunities to practise these skills in real situations. Social misunderstandings need addressing in the real situation as they occur with visual and verbal support for the child in order to make sense of the context. Structured feedback in the form of discussion and recording should supplement self-reflection. The child needs to practise the specific skills with many different people in order to appreciate the subtle differences that can occur. For skills that are too complicated to be taught, the child should be allowed to experience social situations where complex, subtle, nuance-based social interactions arise. Parents and teaching staff need training on how to explain to the child the subtleties and context of each scenario. It must be acknowledged that some social communication situations are extremely complex and are therefore impossible to teach specifically, however, exposure to and explanation of a multitude of social experiences may enable a child to develop some strategies. Many specific skills can be taught using an eclectic approach. Different methods can be adopted, for example, group intervention, individual programmes, visual reinforcement, filming, coaching, modelling and self-reflection. A worked example of an intervention approach for an eight year old girl can be seen in appendix 20; this is just one example of how to create a social communication intervention model.

Time is a key factor in order for any intervention model to work to address social communication. A child's social communication will naturally change over time and changes with age becoming increasingly complex (Olswang et al., 2001; Jones & Schwartz, 2009). Therefore intervention must be planned to continue for several years. Social communication is not something that can be addressed by a one off block of intervention. Limited time, resources and logistical limitations emerged as themes from all of the data sets. These should not be used as an excuse for failing to offer intervention to children and young people with social communication deficits. The data from this piece of research shows that there is a population of individuals that have social communication difficulties. These children find it hard to access learning because of their limited social communication; it impacts on their ability to function within both educational and social settings. Due to misunderstanding, misinterpretation, social confusion and reduced peer relations these individuals have negative experiences and fail to access the curriculum

effectively. It is therefore essential that appropriately trained professionals dedicate sufficient time to implement a complex intervention programme in order to address social communication needs. If time and resources are invested during childhood and adolescence these individuals will be better prepared for adult life and the work place. Only with a structured approach that incorporates and teaches context will the outcome for these individuals be positive.

To measure outcomes of social communication the same process of assessment described in Figure 22 should be repeated. Only with a systematic approach to assessment can comprehensive intervention be implemented and the outcomes of such intervention be measured.

9.3 Conclusions

Social communication is a complex concept that can be described rather than defined. If a clear description or conceptualisation is adopted then it is a very useful term that can be applied to address this complex aspect. From the above discussions it can be seen that there are different types of social communication and with appropriate assessment a child's social communication can be profiled. It is only by having an understanding of what is meant by the term that an appropriate model of assessment can be utilised. With detailed assessment an individual profile of social communication can be created. Intervention needs to address the areas of deficit. This is a complex process and requires multiple methods and strategies in order to help the individual. Intervention must be tailor made but it is absolutely vital that 'context' is given priority. Intervention must be contextual.

Having completed this piece of research I feel that the analysis of all the data indicates that there is a cohort of individuals who do have social communication difficulties that are not part of an autistic spectrum condition. Although it is well documented that social communication is a fundamental area of deficits for individuals with autism I do believe that there is evidence to suggest that social communication is a disorder in its own right. Individuals who currently have the diagnosis of Asperger's Syndrome have atypical social communication but this is also accompanied by restricted interests and repetitive behaviours. These individuals will therefore fall under the category of having an autistic spectrum condition. However, some individuals present with atypical social

communication but they do not have restricted interests and repetitive behaviours. This cohort may have traditionally been labelled pragmatic language impaired or semantic pragmatic disordered but can be considered to have a social communication disorder.

There are three models that I have generated from this research: the conceptualisation of social communication, the model of assessment and the model of intervention. From analysing the data from the literature synthesis, focus groups and interviews I consider that professionals and experts in the field believe these skills can be taught if done so in a very structured and appropriate way. However it is important to point out that all of the subtleties of social communication and the complexities required in blending skills may always remain difficult for individuals whose social communication skills have had to be learned rather than have developed naturally. For individuals with severe intellectual impairment, severely limited self-awareness and social insight (the three fundamental aspects necessary in order to develop social communication) then the assessment and intervention models described in this thesis may not be appropriate. Alternative approaches, for example intensive interaction (Hewett, Firth, Barber & Harrison, 2012) may be more suitable.

As I have taken an inductive stance in my approach to exploring the phenomenon 'social communication' generating theory rather than answering a hypothesis is the outcome of this research. The process of induction has drawn out generalisable inferences from the data (Bryman, 2008; Glogowska, 2011). Applying these theories to my own clinical practice has enabled me to reflect back to my original intention for this research. I wanted to ensure that my own clinical work was underpinned by appropriate evidenced based practice (Sackett et al., 2000). By making sense of the phenomenon 'social communication' I have been able to lay the foundations on which to build the missing pillar in my own clinical practice; 'best available clinical evidence'. If I compare the three new models of social communication derived from this research (conceptualisation, assessment and intervention) with my original intervention model as described in Chapter 3 section 3.2 there are enough similarities to conclude that my own clinical practices in the educational setting are drawing on best available clinical evidence from systematic research. Nevertheless, looking forward, I will need to keep reading and questioning the published literature in order to incorporate new findings.

9.4 Limitations of the study

I recognise that this research study has limitations. These must be set in context when considering my results and discussion. In Chapter 3 section 3.5 I have explained how my research design considered issues of quality control. I evaluated the quality of my study using the criteria, credibility, transferability, dependability and confirmability.

One significant issue that impacts upon this study centres on me as both the researcher and a clinician working with individuals described as having social communication deficits. It is important to reflect and consider how this research has influenced me as a clinician and also how I as a clinician have influenced the research. My role as both clinician and researcher is both a strength and a limitation. It is difficult for me to state confidently that I have been truly objective; however, I must reiterate that I believe I have been honest and transparent from the outset of this study by describing my own clinical practice. My research has been designed, conducted and reported in the spirit of exploration and this is explained in detail in section 3.5. It is important to consider whether the conclusions would be different if a lay person or a different SALT had conducted the study.

The ambiguities, complexities and contradictions that drew me to explore social communication also constrained my options and obliged me to forgo the typical review of the literature, using an unconventional approach. However, this led to insights that supported the later stages of the research.

The number of SALT participants that I was able to recruit for my study was lower than anticipated. Recruitment was made at different stages of the study; this is explained in section 3.7. A total of 222 SALTs were invited to participate in the study (19 in the pilot study, 203 for the survey and the same 203 were invited to the focus groups). I collected data from a total of 41 SALTs; however, the 29 SALTs in the focus groups are also 29 of the 37 SALTs who completed the questionnaire. The 3 SALTs who were interviewed were also in the focus groups. The process of recruitment is a limitation of this study because there are 29 participants who have contributed to two of the data sets (survey and focus groups) and 3 participants who have contributed to three sets of data (survey, focus groups and semi-structured interviews). However it is important to note that despite this limitation there are 4 SALTs who participated in the pilot study focus group alone and 56 additional professionals (teachers and EPs) that participated in the survey. These people

all contributed their individual perspectives as additional data. The data from the literature was also analysed. The strength of the recruitment process is that the focus group allowed more detailed discussion than the survey when exploring social communication and the interviews enabled specific detail to be drawn out that could not be captured from the focus groups. Although there was a cohort of SALTs who contributed to two or more data sets the type of data that they provided differed. The return rate of only 24% for the survey was disappointing as typically researchers desire return rates of 60% (Fincham, 2008) and a larger sample would have provided a larger set of data.

A further limitation would be to consider whether the focus groups and semi-structured interviews would have generated different themes had they been conducted with EPs or teachers. However, this was outside the remit and scale of the project.

As outlined in section 3.5 I have attempted to enable both internal and external validity by introducing techniques such as piloting the questionnaire, using a facilitator in the pilot study focus group and conducting a peer review of the coding of a small sample of the focus group data. Other methods that might have been available with greater resources would include respondent validations, a more thorough peer review of the coding of the focus groups and semi-structured interviews and literature.

This study has identified models for assessment and intervention that are grounded in the data. As discussed earlier in section 9.2.3 if assessment is comprehensive then a profile of a child's social communication can be created. As well as identifying a child's strengths, this type of profiling identifies areas of deficit. Consequently, it is important to reflect on what role a deficit model has played within this thesis. Application of a deficit model opens the debate in terms of who actually has the deficit. To what extent is the deficit located in the child and to what extent is the environment, including the attitude and skill of the communication partner, operating so as to disable the child? In using a deficit model to inform the delivery of intervention, strategies must support a child to address their social communication deficits; by assessing the child in a variety of settings with different people so a clearer picture of these deficits can be made. Intervention might also support the listener to adapt their own communication style or the environment to support the child more effectively.

In many ways the models that have emerged from the data in this thesis could be likened to the traditional medical model; children with a social communication disorder are seen as having problems and the expectation is that they need to change and adapt to circumstances that are presented to them with no acknowledgement that society may need to change. The former International Classification of Impairments, Disabilities and Handicaps (ICIDH, 1980) maintained a medical model perspective. In contrast the social model has been developed by disabled people for whom disability is caused by barriers that exist within society and the way society is organised. Thus the social model of disability acknowledges how society discriminates against people with impairments and excludes them from involvement and participation. The medical and social models can be seen as limited in their interpretation of disability; however the application of a bio-psychosocial model suggests that a combination of biological, psychological and social factors all play a significant role in human functioning. The International Classification of Functioning, Disability and Health (ICF) is the World Health Organisation's framework for measuring health and disability (WHO, 2001). It adopts a bio-psychosocial model of disability. This model reflects the concept that disability is complex and suggests that it includes three dimensions: Body structure and function, for example, that an individual has a deficit, Activities, for example, that there are certain types of activities that are adversely affected by the individual's deficit and Participation, for example, that the deficit prevents the individual from participating in activities that are personally and socially meaningful to that individual. Medical and rehabilitative interventions are appropriate to the body-level aspects of disability (impairments and limitations in a person's capacity to perform actions); however environmental and social interventions are relevant to deal with restrictions in a person's participation in educational, economic, social, cultural and political activities. The use of the bio-psychosocial model embedded in the ICF broadens the perspective of disability. It allows medical, individual, social, and environmental influences on functioning and disability to be examined.

Although at one level the models that have emerged from the data in this thesis can be seen as a deficit/medical model or as the biological aspect of the Bio-psychosocial model it is important to note that all three models in this thesis (figures 21, 22, 23) emphasise the importance of the environment, other people and the context in which the individual communicates. Therefore, although assessment must identify the deficits that the child experiences it also highlights the need to establish if deficits are present in the environment

and other people. The findings of this study emphasise the importance of a holistic approach when meeting the diverse needs of children with social communication challenges. In addressing children's social communication needs the assessment and intervention model requires everyone in the child's environment to work flexibly and creatively to adapt learning and communication environments so that they are conducive to all with social communication deficits.

9.5 How this enquiry makes an original contribution to knowledge and the implications for practice

My earlier discussion (9.2) integrates the findings from all of the data collected. I have drawn together the information from each data set and demonstrated how the data interlinks to enable conclusions to be made regarding each of the major themes. In doing so I have integrated the implications, made conclusions and derived models. This section of my concluding chapter will summarise my interpretations to demonstrate how my findings have contributed to knowledge. To do so in a concise manner I have listed the key factors as follows:

- Social communication is a complex term that can be described rather than defined. A critical review of my findings in light of previous literature has enabled me to devise a new model, which is grounded in the data, to conceptualise social communication (Figure 21).

- By using this model social communication can be explained as a useful term that can be applied within educational and clinical practice.

- The taxonomy of types of social communication that emerged from the integration of the five data sets will enable clinicians to consider the different profiles of children with social communication difficulties. If this is then combined with the emergent model that conceptualises social communication then clinicians will be able to identify how a child's social communication can manifest in different ways.

- By developing a model that conceptualises social communication this has simplified the complex concept that has emerged from the data. This overarching model has enabled more specific models of assessment (Figure 22) and intervention (Figure 23) to evolve. If these principles of assessment and intervention are applied

by clinicians then a new way of working with children with social communication difficulties can be applied to practice in the knowledge that it is based on research and grounded in the data. This would then be open to evaluation as part of an evidenced based practice approach.

- This piece of research has provided information that supports the introduction of the new DSM-V diagnostic category, Social Communication Disorder. This diagnostic category did not exist when my research began and yet the data derived from SALTs, EPs and teachers using different methods of data collection has provided evidence to suggest that this is an appropriate classification.

- This piece of research has contributed to knowledge by explaining social communication in the context of education and more specifically in the clinical field of Speech and Language Therapy.

9.6   Ideas for future research

I feel that my contribution to knowledge includes the conceptualisation of social communication and two further models to address assessment and intervention. These models are now testable. These assessment and intervention approaches can be incorporated by professionals into an intervention study. This would enable an evaluation of the effectiveness of these new approaches.

If these approaches prove effective when clinicians apply them to a cohort of children and young people with social communication difficulties in a small scale pilot study then a wider study could evaluate the effectiveness of these packages. If intervention is implemented with a large group of children described as having social communication deficits then analysis could include whether the intervention affects all children similarly. If not then this would identify if there are different sub-groups. A comparison study of the effectiveness of interventions across sub-groups would then enable clinicians to decide if all individuals with social communication difficulties respond to intervention.

In the light of new legislation, for example The Children and Families Bill (2013), it is important that children/young people and their families are at the centre of any study involving their experiences. A further study exploring the experiences of children and their

families in accessing assessment services, support services and specific intervention for social communication difficulties should be considered.

Another question that merits further exploration, which I have only touched on in this study, is "How do SALTs get from assessment to intervention?" This is a sophisticated, implicit process that clinicians rarely define. A similar research design to this study could be an appropriate approach to adopt in order to investigate this. Indeed future research could also include an exploration of other aspects of communication, for example, language disorder or dysfluency.

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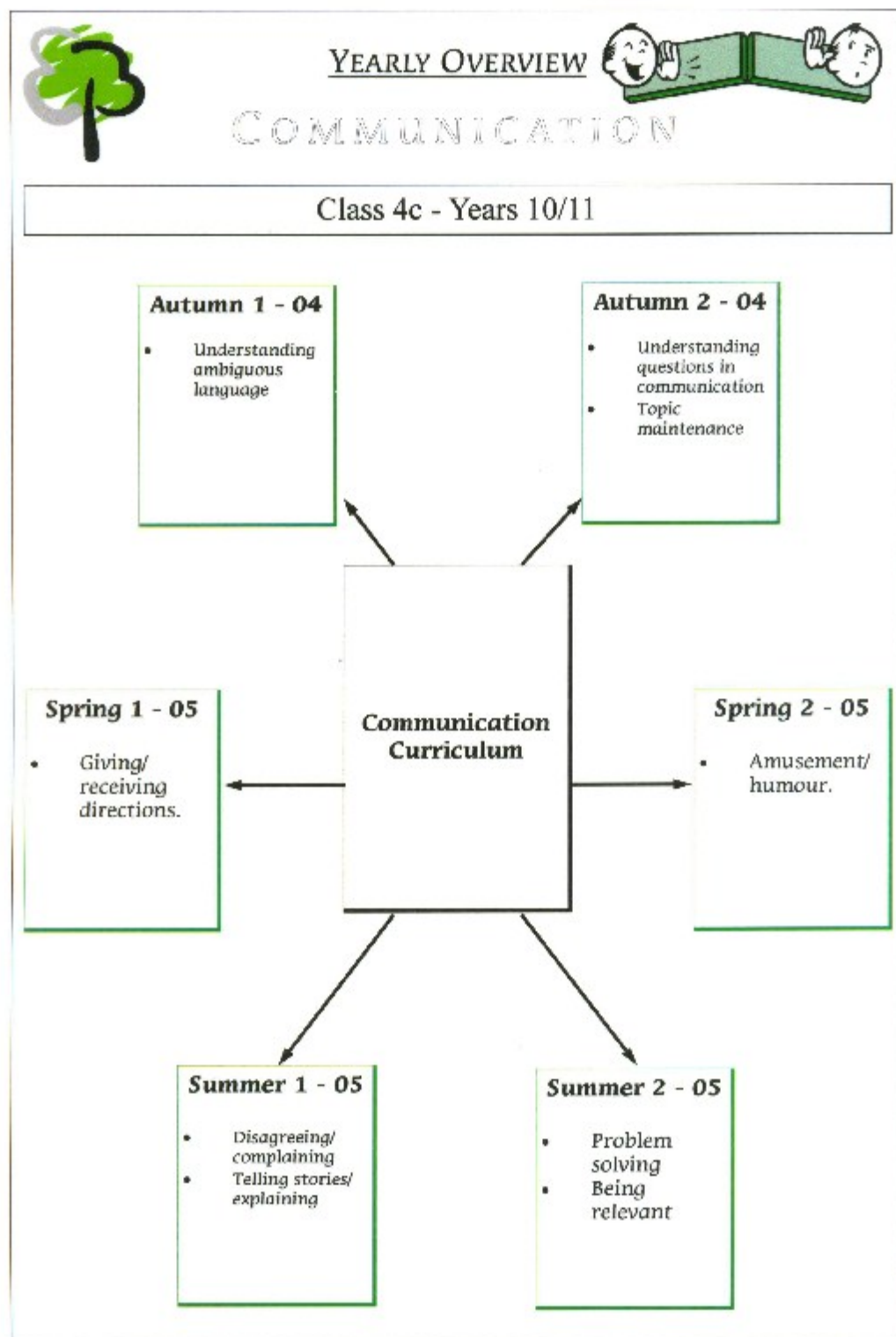
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Appendix 1 – Yearly overview/scheme of work/lesson plan

YEARLY OVERVIEW
COMMUNICATION

Class 4c - Years 10/11

Autumn 1 - 04
- Understanding ambiguous language

Autumn 2 - 04
- Understanding questions in communication
- Topic maintenance

Communication Curriculum

Spring 1 - 05
- Giving/ receiving directions.

Spring 2 - 05
- Amusement/ humour.

Summer 1 - 05
- Disagreeing/ complaining
- Telling stories/ explaining

Summer 2 - 05
- Problem solving
- Being relevant

MATHEMATICS

Class 4C - Year 10/11

Communication Focus:
Understanding ambiguous language

Communication Focus:
Formulating questions, staying on topic.

Autumn 1 - 04
Numbers, probability, direction & position, shape.

Autumn 2 - 04
Scales, algebra patterns, solving problems, Units, Data,

Mathematics Curriculum & Communication Considerations:

Vocabulary (comprehension/expression), semantic links, opportunities for social communication & presentation strategies.

Spring 1 - 05
Decimals, Sequences, Angles, Multiplication & Division.

Spring 2 - 05
Mean, probability, Percentages, Time

Communication Focus:
Giving & receiving directions.

Communication Focus:
Understanding jokes & humour.

Summer 1 - 05
Algebra, Data Handling, Area & Volume, Scale Drawings, Symmetry.

Summer 2 - 05
Lengths, Solids, Averages, Formulae.

Communication Focus:
Disagreeing/complaining, story telling, problem solving.

Communication Focus:
Problem solving, being relevant in conversations.

SCHEME OF WORK

SUBJECT:COMMUNICATION

Week	Learning Objectives	Suggested Activities	Key Vocabulary/ Semantics
1	Pupils understand the purpose of communication lessons. To work together as a group.	Complete communication checklist. Talk through aims of the group. Play a game to emphasise teamwork.	Communication, team, cooperation, talking, conversations.
2	Pupils to increase their awareness of words with multiple meaning.	Define multiple and meaning. Define ambiguous. Card game from fun deck cards.	Multiple, ambiguous, meaning, two. Various vocabulary of words that have two meanings.
3	Pupils to understand the multiple meanings of selected words.	Card game from fun deck. Activities from mean one thing say another.	Multiple, ambiguous, meaning, two. Various vocabulary of words that have two meanings.
4	Pupils to increase their awareness of phrases that have hidden meanings.	Idiom board game Idiom fun deck game	Multiple, ambiguous, meaning, two. Various vocabulary of words that have two meanings.
5	Pupils to understand the hidden meaning of certain phrases.	Activities from don't take it so literally! Practical language activities in the classroom resource	Multiple, ambiguous, meaning, two. Various vocabulary of words that have two meanings.
6	Pupils to practice using ambiguous language in structured situations.	Role play scenarios using idioms.	Multiple, ambiguous, meaning, two. Various vocabulary of words that have two meanings.

Opportunities for Accreditation:

EXAMPLE 4

Rowland/Brown

TERM:AUTUMN 1

Resources & Presentation Strategies	Communication Focus	Assessment
Communication checklist Visual aims Team puzzles.	Teamwork	Ability to join in activity Contribution to discussion Answers to direct questions
White board Fun deck cards	Understanding ambiguous language. Words with multiple meanings. Idioms.	Ability to join in activity Contribution to discussion Answers to direct questions
Fun deck cards Saying one thing meaning another.	Understanding ambiguous language. Words with multiple meanings. Idioms.	Ability to join in activity Contribution to discussion Answers to direct questions
Idiom board game Idiom fun deck cards	Understanding ambiguous language. Words with multiple meanings. Idioms.	Ability to join in activity Contribution to discussion Answers to direct questions
Don't take it so literally workbook. Practical language in the classroom resource .	Understanding ambiguous language. Words with multiple meanings. Idioms.	Ability to join in activity Contribution to discussion Answers to direct questions
Planned role play situations.	Understanding ambiguous language. Words with multiple meanings. Idioms.	Ability to join in activity Contribution to discussion Answers to direct questions

Use of ICT:	Application of Number: Counting in board game. Dividing cards equally for game.

Rowland/Brown

LESSON PLAN

SUBJECT : COMMUNICATION

Class: 4c	Date: September	Nº of pupils: 6
Year: 10/11	Term/week: Aut1/2	Average level:

Introduction:
Collect ambiguous language symbol from Velcro board.
Define ambiguous and discuss aims of lessons.

Expansion

Objective:
To increase words with multiple meaning.

Activities:
1. Brainstorm the definitions of the words multiple and meaning.
2. Play card game from 'Fun Deck Cards'.
3. Verbal quiz in two teams using words with multiple meaning e.g. 'sun' and 'son' can pupil provide the meanings of these words that sound the same.

Key Vocabulary/Semantics:	SSA support:
Multiple Ambiguous Meaning Two Various vocabulary of words with multiple meanings.	To model good communication skills. To support SH with fine motor control required for handling cards.

Aspects supported by ICT:	Visual Presentation/Resources: Visual symbol for ambiguous language Fun Deck Cards Vocab cards Whiteboard

Plenary

Key Questions:
What dos multiple mean?
What does ambiguous mean?
Define meaning.
Can you give examples of words that sound the same but have several meanings.

Evaluation:

Were there opportunities for:

Listening
Auditory memory
Following instructions
Sequencing skills
Explaining
Thinking skills
Reasoning
Self awareness
Turn taking
Taking messages

Offering help
Teamwork
Asking for help
Giving information
Shared knowledge
Expressing emotions
Expressing opinions
Asking questions
Problem solving
Giving/receiving directions

| Pupil	Assessment	Comment
SH	🟢	
LK	🟢	
AB	🟢	Despite AB's difficulties he has no problem with this concept.
DP	🟢	
SC	🟠	Was able to define terms but struggled to identify more than one meaning for specific words and required verbal prompts.
RB	🔴	Had no understanding of the concept.

Green 🟢	Reached objective	Orange 🟠	Support required	Red 🔴	Objective not reached	Therapist: J. Brown

LESSON PLAN

MATHEMATICS
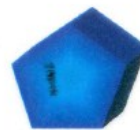
| Class: 4c | Date: September | Nº of pupils: 6 |
| Year: 10/11 | Term/week: Autumn 1/2 | Average level: 2 |

Introduction:
Mental addition of 7 to any two digit number. Use large number fan to visually display two digit number, pupils display answers on small number fans.

Expansion

Objective: Addition of 2 digit numbers using written methods.	Planned opportunities for (communication focus): ambiguous language. Deliberately use idioms during lesson and explain their meaning e.g. 'in a pickle'. Identify words during lesson that may have more than one meaning such as, column, carrying, digit, place,.
Activities: 1. Introduce objective, discuss when we need to use written methods of addition. 2. Discuss language related to addition & discuss any ambiguous words. 3. Remind pupils of place value of columns. 4. Use whiteboard to show layout of written addition.	5. Pupils take it in turns to demonstrate in front of class. 6. Pupils complete exercise 1.3A. 7. Discuss answers as a group. 8. Extension activity - use computer program Mathsbook to consolidate written methods and extend to include decimals.
Key Vocabulary/Semantics: Column, carrying, place value, digit, number, addition, subtraction, method, strategies, plus, add on, altogether, total, more than,	**SSA support:** Model good communication skills. Support RB with setting out of sums. Check understanding of instructions.
Aspects supported by ICT: Mathsbook Interactive whiteboard	**Visual Presentation/Resources:** Interactive whiteboard Small whiteboards Number fans Adapted Exercise worksheets

Plenary	Were there opportunities for:

Plenary

Key Questions:
Give me some words that mean addition.
Can anyone recall an idiom used in today's lesson?
Ask volunteer to complete example question on whiteboard.

Evaluation:

Were there opportunities for:

(Listening) Offering help

(Auditory memory) Teamwork

(Following instructions) (Asking for help)

Sequencing skills Giving information

(Explaining) Shared knowledge

(Thinking skills) Expressing emotions

Reasoning Expressing opinions

Self awareness (Asking questions)

(Turn taking) (Problem solving)

Taking messages Giving/receiving directions

Pupil	Assessment	Comment	Communication Focus
D P	🟢	Also completed extension activity using decimals.	🟢
L K	🟢		🟢
R B	🟠	Find it difficult to remember to put unit number down and carry tens.	🔴
S H	🟠	Needed support to remember to start on units column.	🔴
A B	🔴	Worked so slowly that it was difficult to establish if he had met objective.	🟢
S C	🟢		🟠

Green 🟢 Reached objective Orange 🟠 Support required Red 🔴 Objective not reached Teacher: *P Rowland*

Appendix 2 – Social communication curriculum

Key stage 3 Basic skills	Key stage 3 Intermediate skills	Key stage 3 Advanced skills
Listening	Eye contact	Introducing self and others
Auditory memory	Volume	Ending conversations
Processing	Rate	Taking messages
Following instructions	Body language	Offering help
Vocabulary expansion	Facial expression	Staying on task
Semantic links	Tone of voice	Teamwork
Sequencing skills	Listening	Asking for help
Explaining	Personal space	Asking permission
Thinking skills	Self-awareness	Asking for information
Reasoning	Turn taking	Shared knowledge
Concepts	Following instructions	Feelings/emotions
	Formal v informal language	Friendship
	Time and place	Listener awareness
	Manners	
	Revision of basic skills	

Key stage 4 Basic skills	Key stage 4 Intermediate skills	Key stage 4 Advanced skills
Listening	Understanding ambiguous language	Developing a group concept
Auditory memory	Understanding questions in communication	Communicating with others
Processing	Topic maintenance	Understanding oneself
Following instructions	Giving/receiving directions	Exploring self-esteem
Vocabulary expansion	Amusement/humour	Defining self-esteem
Semantic links	Disagreeing/complaining	Social values and myths
Sequencing skills	Telling stories/explaining	Differences and similarities among people
Explaining	Problem solving	
Thinking skills	Being relevant	
Reasoning		
Concepts		

Appendix 3 – Letter of approval WLPCT ethics committee

West Lancashire Local Research Ethics Committee
c/o Scarisbrick Centre
Ormskirk and District General Hospital
Wigan Road
Ormskirk
Lancashire
L39 2JW

Telephone : 01695 598281
Facsimile : 01695 598238
E-mail : Eric.Albery@nswl-tr.nwest.nhs.uk

Chairman : Mrs D Howel
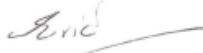Administrator : Mr EH Albery

30 June 2003

Dear Judith,

COMMONALITY AND DIVERSITY IN DEFINING SOCIAL COMMUNICATION AMONGST SPEECH AND LANGUAGE THERAPISTS

Further to our telephone conversation today I can confirm that Mrs Howel, Chairman of West Lancashire Local Research Ethics Committee has read the above study and feels that ethical approval is not necessary and you may now proceed.

Your sincerely.

EH ALBERY (ADMINISTRATOR)
WEST LANCASHIRE LOCAL RESEARCH ETHICS COMMITTEE

cc Miss T Evans

Appendix 4 – COREC approval February 2004

South West Multi-centre Research Ethics Committee

The Lescaze Offices
Shinner's Bridge
Dartington
Devon
TQ9 6JE

04 February 2004

Tel: 01803 861947
Fax: 01803 861914
Email: swmrec@sw-devon-ha.swest.nhs.uk

Dear Mrs Brown

Re: MREC/03/6/64: The effectiveness of learning social communication skills in a group setting: a comparative study of school students with moderate learning difficulties and school students with autistic spectrum disorders.

The Chairman on behalf of the committee has considered your response to the issues raised by the committee at the first review of your application on 10 July 2003 as set out in our letter dated 15 July, 15 October and 18 December 2003. The documents considered were as follows:

- Application form dated 13 June 2003
- Proposal , not referenced, not dated
- A Survey of Provision for Students with Social Communication Deficits, not referenced, not dated
- Information for Speech and Language Therapist, not referenced, not dated
- Consent for Speech and Language Therapist Participation, not referenced, not dated
- Information for Psychologists, Teachers and care working, not referenced, not dated
- Consent for Student Participation in Research Study, not referenced, not dated
- Focus Group Schedule, not referenced, not dated
- Curriculum Vitae – Mrs Judith Brown

The Chairman, acting under delegate authority, is satisfied that your response has fulfilled the requirements of the committee. You are therefore given approval for your research on ethical grounds providing you comply with the conditions of approval set out below:

Conditions

1

- You may only recruit subjects once you have received notification of no objection from the relevant locality agent that has been confirmed by this MREC.

- You do not undertake this research in a NHS organisation until the relevant NHS management approval has been received.

- You do not deviate from, or make changes to, the protocol without prior written approval of the MREC, except where this is necessary to eliminate immediate hazards to research participants or when the change involves only logistical or administrative aspects of the research. In such cases the REC should be informed within seven days of the implementation of the change.

- You complete and return the standard progress report form to the REC one year from the date on this letter and thereafter on an annual basis. This form should also be used to notify the MREC when your research is completed and in this case should be sent to this REC within three months of completion. For a copy of the progress report please see www.corec.org.uk

- If you decide to terminate this research prematurely you send a progress report to this MREC within 15 days, indicating the reason for the early termination. For a copy of the progress report please see www.corec.org.uk

- You must advise the MREC of all Suspected Serious Adverse Reactions (SSAR's) and all Suspected Unexpected Serious Adverse Reactions (SUSAR's) using the forms available from the website www.corec.org.uk

- You advise the MREC of any unusual or unexpected results that raise questions about the safety of the research.

- The project must be started within three years of the date on this letter.

Local submissions

It is your responsibility to ensure that any local investigators seek the approval of locality issues from their relevant LREC before starting the research. To do this you/the local researcher should complete and submit one copy of part C of the application form and contact the relevant LREC, details available on the www.corec.org.uk. Once the LREC has informed the approving MREC of their acceptance of locality issues, the MREC will issue the chief investigator notification so that recruitment can start in that area.

Please direct any queries about the progress on the review of locality issues to the relevant LREC, not to the MREC office.

NHS MREC's are compliant with the International Conference on Harmonisation/Good Clinical Practice (ICH GCP) Guidelines for the conduct of trials involving participation of human subjects.

2

> Your application has been given a unique reference number; please use it on all correspondence with the MREC.

Yours sincerely

Blua

Dr John Alexander PP
Chairman
SW MREC

SOUTH WEST MULTI-CENTRE RESEARCH ETHICS COMMITTEE

RESPONSE FORM

DETAILS OF APPLICANT:

1.   ~~Name and address~~ of Principal Researcher:

2.   **Title of project:**

Evaluation of Speech and language therapy for social communications skills.

3.   **Name and address of Sponsor:**

None given.

DETAILS OF MREC:

4.   **Name and address of MREC:**

South West MREC
South Hams and West Devon PCT
The Lescaze Offices
Shinner's Bridge
Dartington
Devon TQ9 6JE

5.   **MREC Reference Number:**

MREC/03/6/64:

Listed below is a complete record of the review undertaken b y South W est MREC with the decisions made, dates of decisions and the requirements at each stage of the review:

Date of review: 10 July 2003.

Decision made: Approval subject to revision.

Issues raised:

1/7

Appendix 5 – COREC notice of substantial amendment and final approval May 2005

South West Multi-centre Research Ethics Committee

The Lescaze Offices
Shinner's Bridge
Dartington
Devon
TQ9 6JE

27 May 2005

Tel: 01803 861947
Fax: 01803 861914
Email: swmrec@sw-devon-ha.swest.nhs.uk

Dear Ms Brown

Re: MREC/03/6/64 – Social Communication: An Exploration of Provision and an Investigation into the Effectiveness of common intervention models.

The above amendment was reviewed at the meeting of the Sub-Committee of the Research Ethics Committee held on 25 May 2005.

Ethical opinion

The members of the Committee present gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

- Notice of substantial amendment form version 2 dated 1st May 2005
- Original Protocol version 1.1 not dated
- Amended Protocol version 1.2 dated February 2005
- Information Sheet for Interview version 1.3 not dated
- Consent for Interview version 1.4 not dated
- Information Sheet for Reflective Journal + Consent 1.5+1.6 not dated

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Management approval

All investigators and research collaborators in the NHS should notify the R&D Department for the relevant NHS care organisation of this amendment and check whether it affects local management approval of the research.

The Central Office for Research Ethics Committees is responsible for the operational management of Multi-centre Research Ethics Committees

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

REC reference number: MREC/03/6/64	Please quote this number on all correspondence

Yours sincerely

Slug~

Barbara Inger
Committee Administrator

Enclosures   List of names and professions of members who were present at the meeting and those who submitted written comments

Appendix 6 – Consent forms and information sheets

Information sheet and consent for teachers and EPs

Introduction
I am currently undertaking a study as part of an MPhil/ PhD to determine the effectiveness of Social Communication Groups. As part of this study it is necessary to establish what is currently offered to students who have deficits in the area of social communication and what is common practice for implementing a service to these students. The information gained from this stage will inform the next stage of the study when group intervention will be evaluated. It is then anticipated that this information will inform clinical practice.

Why do I need you to take part?
You are being invited to take part in this study because: -

•   You will be able to provide me with information about current service provision within the North West Region.

•   I am interested in your views about what is or isn't being offered to students with social communication deficits and what your opinion is about the best approach to take with this client group.

What will you have to do if you take part?
If you decide to take part, you will need to complete the enclosed questionnaire**.**

Advantages to taking part.
•   You will be able to contribute to an understanding of what provision is available to children with social communication deficits.
•   You will have the opportunity to request a copy of the results of the study.

Disadvantages to taking part.
•   You will be required to dedicate some time to completing the questionnaire.

Are you obliged to take part?
I hope that you would like to take part in this study, but there is no obligation to do so. Please take time to consider your involvement in this study. Whether or not you decide to take part, I will not pass on any information about your decision to your managers and confidentiality will be absolutely respected.

If you do decide to take part, you have the right to change your mind and withdraw your consent at any time during the study.

If you are unhappy about how the study has been conducted you are entitled to complain to the department of Psychology and Speech Pathology at Manchester Metropolitan University.

What if you have any questions?
If you would like more information about the study or an opportunity to discuss further, please contact:
Judith Brown -Speech and Language Therapist

What do you need to do next?
Please complete the questionnaire and return it in the stamped addressed envelope. Please fill in the consent form that is attached to this sheet and return it in the stamped addressed envelope. This will be detached immediately upon receipt to maintain anonymity.

Thank you very much for your support and assistance it is very much appreciated,

Judith Brown (Speech and Language Therapist)

FORM 1A: CONSENT QUESTIONNAIRE PARTICIPATION

Please initial the appropriate boxes:

I have read the information about this study   YES ☐ NO ☐

I consent to take part   YES ☐ NO ☐

I am aware that I can withdraw from the study at any time ☐ ☐

   NO

I would like to receive a summary of the Study's findings ☐ ☐

   NO

Name _____

Address_____
_____
_____
_____
_____
_____

Signed_____

Date   _____

Signature of researcher   _____

Date   _____

Please keep a signed copy of this for your information

Information sheet and consent for SALTs

Dear,

In March 2004 I contacted you regarding my research study. You kindly agreed to allow your therapists to participate by completing a questionnaire and possibly attending a focus group.

I am enclosing information sheets, consent forms, questionnaires and stamped addressed envelopes. I would very much appreciate it if you would distribute these to your paediatric therapists.

For your information I have also enclosed copies of ethical approval for this study.

I will contact you again in two weeks time as a reminder.

This is a formality that is required as response rate is important for the validity of the study.

Thank you for your time and cooperation in this matter.

Kind regards,

Judith Brown

(Speech and Language Therapist)

Introduction

I am currently undertaking a study as part of an MPhil/ PhD to determine the effectiveness of Social Communication Groups. As part of this study it is necessary to establish what is currently offered to students who have deficits in the area of social communication and what is common practice for implementing a service to these students. The information gained from this stage will inform the next stage of the study when group intervention will be evaluated. It is then anticipated that this information will inform clinical practice. A second focus group will be arranged after analysis of the data collected from the first group. This will allow findings to be discussed with participants and prompt discussion about implications for service provision. There will be approximately 24 Speech and Language Therapists selected as an opportunistic sample.

Why do I need you to take part?

You are being invited to take part in this study because: -

- You will be able to provide me with information about current service provision within the North West Region.
- I am interested in your views about what is or isn't being offered to students with social communication deficits and what your opinion is about the best approach to take with this client group.
- The information that you provide will enable the intervention study to reflect common practice.

What will you have to do if you take part?

There are two methods of data collection for this study. If you decide to take part, you will need to complete the enclosed questionnaire. You will also be invited to attend a focus group session. This will be an informal meeting that will be facilitated by the researcher. The agenda of the focus group will centre on the following topics: -

- What therapists offer to address the needs of children with social communication deficits?
- What is thought to be current best practice for these children?
- What areas of communication would be key areas to work on?
- What sort of intervention strategies /therapy techniques are most widely used?

The focus group will be tape-recorded and at the end of the project the recording will be destroyed (this is likely to be November 2009). The supervisors of the PhD and the examiner are the only people who may see the data. A second focus group will be arranged after analysis of the data collected from the first group. This will allow findings to be discussed with participants and prompt discussion about implications for service provision.

Advantages to taking part.

- You will be able to contribute to an understanding of what provision is available to children with social communication deficits.
- You will be given an opportunity to express your opinions on current issues.

Disadvantages to taking part.

- You will be required to dedicate some time to completing the questionnaire.

Are you obliged to take part?

I hope that you would like to take part in this study, but there is no obligation to do so. Please take time to consider your involvement in this study. Whether or not you decide to take part, I will not pass on any information about your decision to your managers and confidentiality will be absolutely respected.
If you do decide to take part, you have the right to change your mind and withdraw your consent at any time during the study.

If you are unhappy about how the study has been conducted you are entitled to complain to the department of Psychology and Speech Pathology at Manchester Metropolitan University.

What if you have any questions?

If you would like more information about the study or an opportunity to discuss further, please contact:
Judith Brown -Speech and Language Therapist

What do you need to do next?

Please complete the questionnaire and return it in the stamped addressed envelope. Please fill in forms 1A (consent for questionnaire) and 1B (consent for focus group) that are attached to this sheet and return them in the stamped addressed envelope. These will be detached immediately upon receipt to maintain anonymity.

Thank you very much,   Judith Brown (Speech and Language Therapist)

FORM 1B: CONSENT FOR FOCUS GROUP PARTICIPATION

Study into the Provision for those with Social Communication Deficits

I have read the information about this study. I have taken time to consider the information and I would like to take part.

Name: _____   Telephone: _____

Address:

_____

Email:

_____

I understand that I will be contacted and invited to a focus group. The date, time and venue will be confirmed.

I would like a copy of the final study results to be sent to the above address. YES NO (circle as appropriate)

Signed: _____

FORM 1A: CONSENT QUESTIONNAIRE PARTICIPATION

Please initial the appropriate boxes:

I have read the information about this study   YES ☐ NO ☐

I consent to take part   YES ☐ NO ☐

I am aware that I can withdraw from the study at any time

YES ☐ NO ☐

I would like to receive a summary of the Study's findings

YES ☐ NO ☐

Name _____

Address_____
_____
_____
_____
_____

Signed_____

Date   _____

Signature of researcher   _____

Date   _____

Please keep a signed copy of this for your information

Focus Group Information

Thank you for agreeing to attend my Focus group on Wednesday 25th May. Your time is very much appreciated.

A buffet lunch is provided and will be ready for 12.00. The group session is intended to start at 1.00pm and will continue for as long as the discussion carries itself.

I have included some directions to Pontville and hope that these will be sufficient to get you here! If you should need a map it is probably best to use the website streetmap.co.uk to give you the clearest picture of where we are.

When you arrive at Pontville you should go to reception where you can sign in. Someone will then come to collect you to direct you to the Speech and Language Department.

Ten therapists have been invited to the group. I have had 6 people agreeing to participate. For a focus group to be viable it is necessary for there to be at least 4 participants. Please let me know in advance if you are unable to attend as I would hate to waste colleague's time and efforts in coming here if the group has to be disbanded.

It is difficult to provide much information about the format of the focus group as it is intended to be very informal. The following points may provide you with some idea of what to expect:

- ❖ The researcher will be facilitating the group.
- ❖ The session will be tape recorded.
- ❖ Discussion will aim to address the following:
  What assessments are used to create a profile of social communication deficits?
  What do therapists offer to address the needs of children with Social communication deficits?
  What is thought to be current best practice for these children?
  What areas of communication would be key areas to work on?
  What sort of intervention/therapy techniques are most widely used?
  How is progress/effectiveness measured?

Should you have any further questions then please do not hesitate to contact me.

Thank you for your help,

Jude
Judith Brown (Speech and Language Therapist)

Interview Information

Thank you for participating in this focus group. The next phase of my research project is to look into more detail at the type of intervention models that are being used to support individuals with social communication deficits.

This phase, therefore, involves conducting semi-structured interviews with Speech and Language Therapists who are implementing strategies within their clinical setting.

If you are working with individuals with social communication deficits and feel that your input would be valuable to this study I would be grateful if you would provide your consent to be interviewed.

What will be involved?
- The researcher will conduct the interview at a venue that is convenient for you.
- The interview will last no longer than 45 minutes.
- The interview will be tape recorded (this will be destroyed at the end of the project).
- You will be invited to keep a reflective journal as follow up to your interview. (This will be optional and will require additional consent).

Should you have any further questions then please do not hesitate to contact me.

Thank you for your help,

Jude

Judith Brown (Speech and Language Therapist)

FORM 1A: CONSENT INTERVIEW PARTICIPATION

Please initial the appropriate boxes:

I have read the information about this study   YES ☐ NO ☐

I consent to take part   YES ☐ NO ☐

I am aware that I can withdraw from the

study at any time   YES ☐ NO ☐

I would like to receive a summary of the

Study's findings   YES ☐ NO ☐

Name _____

Address_____

_____

_____

_____

Signed_____

Date   _____

Signature of researcher   _____

Date   _____

Please keep a signed copy of this for your information

Appendix 7 – A sample of transcribed and coded data

7a Pilot study

CODES	ISSUES DISCUSSED	THEMES IDENTIFIED	THEMES AS BASIC THEMES	ORGANISING THEMES	GLOBAL THEMES
1. Wide	1. Sliding scale	• Social communication is a wide area.	• Social communication is a wide area.	• There is ambiguity in defining social communication.	• Defining social comm is complicated by, ambiguity, assumptions and complexity.
2. Dependant	1. Widest	• Social communication is dependant on other things.	• Social communication is dependant on other things.	• There are assumptions made when defining social communication.	
3. Vague	1. Wide ranging	• Social communication is a vague area.	• Social communication is a vague area.	• Defining social communication is complex.	
4. Assumption	2. Dependant on needs	• Therapists assume they mean the same thing.	• Therapists assume they mean the same thing.		
5. Complexity	2. Dependant on age	• Therapists perceive social communication to mean the same thing.	• Therapists perceive social communication to mean the same thing.		
	3. General term	• Defining social communication is complex.	• Defining social communication is complex.		
	3. Subheadings merge				
	3. Wordy				
	3. Things link				
	4. Therapists assume				
	4. Therapists perceive				
	5. It is a problem to define				
	5. It is not straightforward				
	5. It is hard to define				

JH	To begin with er I like to look at how you as Speech Therapists define the term social communication er would anyone be willing to begin to get the ball rolling in a way and explain what they perceive the term to mean for themselves.
MB	How people use language to interact with each other
MJ	I think I would go perhaps for how people use communication in its broadest sense and how they adapt that to cope with different people and situations.
JH	So in a way then very fluid
MJ	yes
LG	Yes , very functional I see it, a very functional thing
MJ	yes
LG	So that you are not actually .. you can communicate at a two word level functionally or at a university degree level functionally. It is disability to communicate at your own particular level, erm with other people.
JH	So in a sense is there two aspects to it, one is a sense of the actual physical aspect of communication and another the context in which the person is. Your saying that it varies in a way
LG	Its like a sliding scale in that erm
CG	I suppose that it is what your saying that there is the persons own method of communication in the social group, but then it is tailored to the, as you say, context of where it is. One person may communicate, use different communication styles for different scenario.
LG	yes
JH	To start with then can I ask whether you all agree on the definition before we go into how it varies in the context (laughter) whether you all agree that it means the same thing. (pause)
JH	Going back to how you defined it before would you all agree that that was an accurate definition or would you add things to that?
MB	Communication is a better word than language
MJ	Yes, yes, I feel that language is a bit narrow
MB	I meant communication! (laughter)
MJ	Communication in its widest sense because you are talking about more than language, you are talking about non-verbal communication erm and also what people understand about a situation erm and how how they use that information to keep the conversation going and things like that erm.
MB	I suppose the actual use of the language is all that, isn't it it is all that extra communication, the body language the non- verbals
JB	Can I just ask does every one use the term social communication?
LG	Yes we're running social communication groups but it covers a wide range of different aspects of social communication depending on what age the group is what you feel that the needs are for that particular group
MJ	If you have got a group that is very vocal erm you know verbal you would perhaps talk about the conversational strategies for repairing you know what do you do when conversation breaks down but you wouldn't want to do that with younger children it wouldn't be appropriate... so it does depend on their age and their ability
LG	Yes, I'm just thinking I did a small social group with just three teenage downs

	children and there had been concerns about inappropriate touching and so we did a whole sort of social thing on body language body awareness and using the right vocabulary and so that they could sort of participate in the biology lesson that was going to be coming up more appropriately, but that was social communication erm it came under that heading if you like if anyone asked me what I was doing but it was quite specific. So it can be specific or it can be much more general.
JH	I think perhaps erm, cos like I say I have no knowledge of speech Therapy that I might be missing something, you seem to be talking about a lot of things that affect or influence social communication such as the abilty of one the people and the context in which the interaction occurs erm without, I'm still not clear how you would define the term social communication
MJ	I think it is very hard to define without getting very, very wordy.
CG	mmm
MB	mmm
MJ	I think that's the problem. I don't know if anyone else thinks the same
LG	I think you are probably better leaving it very simple as an overall umbrella then within that you have different strands that you pull out of it
MJ	YES
JH	Do you think as a profession as a whole then that is how the term is frequently used that you all in a way assume that other people you speak to understand the term without people necessarily specifically defining it? Would that be true or…
MB	You mean people outside the profession?
JH	No within your profession as Speech Therapists is it a term you use and you in a way you assume that other Speech Therapists understand what the term means without needing to…
MB	I think most of them do… well… unless perhaps you are newly qualified obviously and that would be…. I think most or certainly people I have used it with I have never thought that we were talking at crossed purposes or anything like that
LG	Certainly people outside our profession now use it that term social communication
CG	Yes even when you are talking with teachers (a group yes) and you mention social communication they seem to understand what you are talking about
JH	Do they seem to have the same meaning or definition for the term as you do?
MB	Probably not I would think!
LG	I think they would tend to lump it all with ASD
MB	They see communication as the expressive side mainly
LG	Yer
MB	Don't they, wereas we…
JH	As in the physical aspect of language and non-verbal cues
CG	I don't even think they might understand the non-verbal side (group no) they might just go for the language and think that is social communication
MJ	Yes how you get on with the people, your peers. How children get on with the other children in their class.
CG	But even then I think sometimes when we mention social communication they see does the child we're thinking about talk to other children and they just look at it in that sense rather than are they interacting non-verbally do they play along side them or with them so they may think that a child is functioning fine social like

274

7b Literature synthesis

- 🟨 definition / terminology ✓
- 🟥 measures / assessment ✓
- 🟩 Evidence base.
- 🟪 Intervention ✓
- 🟫 models of language ✓
- 🟧 aetiology ✓
- 🟦 outcomes

(aetiology)	"Deficits in pragmatic language ability are common to a number of clinical populations, for example, right-hemisphere damage RHD, Autism and Traumatic brain injury (TBI)"	Martine McDonald 2003
(Term—definition)	The basic structure of language may be intact, but the ability to use language to engage socially is impaired.	
(aetiol)	"Causal explanations for prag difficulties across these populations is divergent and sometimes contradictory"	P 451

(model)	They refer to the traditional components of language as
	  − phonetics
	  − Semantics
	  − syntax
	
	They state these are insufficient to explain the richness of meanings when language is used to communicate	

Yes interchangeable.

I don't think I do really I think of pragmatics as more associated with actual words were as social communication is a much wider term that can also be about behaviour. I mean that might be just me.

I agree with what you are saying that there are some things that you get in one category and not in the other but I also think that more and more people are using the expression social communication rather than pragmatics.

Overlap of the terms

It's a bit fudgey and there is some overlap.

But also you've got like we said the added issues of facial expression and everything that maybe not under pragmatics. So there is probably like an overlap.

Origin of terminology

Definition of social communication

I think it is more functional and sort of explains what you are talking about really.

It is one aspect of communication like you said before. Its communication, but less formal. I don't know. Social communication means to me being out and about and having a drink: No no its much more than that: But that is what the lay person thinks...

It is every situation in life

if there are two people than it is social in a way isn't it? Interaction it is a giving and a taking.

Speaking to a load of delegate at a conference than that is still social communication isn't it?

But isn't any communication social.

Well in order to communicate there has to be another person there doesn't there. Could it not then just be communication?

Well I suppose there is written stuff which isn't social communication isn't there. But it is still communication. You can write a letter to someone without having any social communication: But you have to obey social rules though. Because you have to put dear sir and yours sincerely.

Definition of pragmatics

Well things like understanding ambiguity and idioms homonyms all that stuff I would kind of think as more pragmatic.

Because it is specific to language were as social communication can also encompass non verbals erm all that stuff about knowing when to initiate that is all part of social communication but I wouldn't say that was part of pragmatics.

	across their profile is so spikey you know that its just, you can't predict. But with a normally developing child their profile is pretty even and its moving up this way and you can see that is mainly to do with maturation but its much more difficult to prove. I mean we wouldn't be doing it if we didn't think it was having an effect I mean we really wouldn't.
	May be we somehow, I don't know how but tie in more with daily life particularly the older ones. Very aware that they from a preparation point of view. It would probably go a long with them in real situations you like in work experience.
	I agree with that entirely but I find that because we have got so many children in our caseload it's not manageable. I feel that if I sit in the classroom and observe children and I am not doing anything direct I am not directly training the teacher or ssa I feel that it is a luxury. I can't allow for luxury. I should be doing this. I should be doing that. Not sitting there lesson after lesson observing this child.
	That is right it depends…
	It could be a whole morning to take a child to do something.
	It is preparing them for life isn't it.
	But have you got the time to do that?
	It is very hard. We have tried lots of different ways done the one to ones, we've done the classroom work but something has to give whatever method you are taking and now I have got groups of children to write reviews for and you havn't necessarily seen them one to one and for long enough to get the information that you need and so you are constantly spreading yourself too thin.
	And then you need the time to assess them to write the reports.
	Yes an informed report that does relate to that child not just a vague.
JB	Do you think therefore that our intervention is very much affected by time restraints?
	Of course
	Yes
	We choose the ones that we kind of feel work like the language disorder and the phonology and it's the social communication ones that get left to one side because we can't justify that time in class observing or spending the morning with them and teaching them how to navigate a trolley around Asda. Erm because you think those children that I could be
	But other people could do that couldn't they. That could be other peoples remit. I don't think it should all be us.
	But I find that if I get someone else to do it then it is not the same as the hands on yourself. But that is exactly what happens cos if you give it to someone else to do they are not trained in the same way as we are and they are not looking at the same things as we are…..
	Its not the same perceptions!
	I am glad someone else feels like that. I just thought that cos I am being encouraged to work with Speech Therapy assistants, we are just starting to employ them, and I just feel personally that I just want to do it myself cos I know it is being done the way that I want

278

Questionnaire 1 - Teachers

A Survey of
Provision for Students
with Social Communication
Deficits.

All answers will be dealt with in strict confidence.
Please tick the relevant boxes.
The questionnaire will take approximately
ten minutes to complete.
If there is more than one "other"
answer then please continue on an
additional sheet clearly marking
which question the answer relates
to.

| 1. | What is your profession? | Teacher | ❑ |
| | | Care Worker | ❑ |

2.	Where do you work?	School	❑
		Individual's home	❑
		Residential setting	❑
		Other	❑
	(tick all that apply)		
		*Please specify*_____	

3.	What student groups	Moderate Learning Difficulties	❑
	do you work with?	Severe Learning Difficulties	❑
		Autistic Spectrum Disorders	❑
		Attention Deficit disorders	❑
		Emotional Behavioural difficulties	❑
		Specific Language Impairment	❑
		Other	❑
	(tick all that apply)		
		Please specify _____	

4.	What age groups	Pre-school (ages 0-4)	❑
	do you work with?	Primary (ages 5-11)	❑
		Secondary (ages 11-16)	❑
	(tick all that apply)	16 +	❑

5.   How would you define social communication?

_____

_____

_____

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_____

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_____

_____

6.	How many of your current students do you believe have social communication deficits?	aprox 100% aprox 75% aprox 50% aprox 25% less than 25%	❑ ❑ ❑ ❑ ❑

7.	When working with individuals who have social communication deficits, which other professionals do you consult with? *(tick all that apply)*	Speech & Language Therapists Occupational Therapists Physiotherapists Educational Psychologists Clinical Psychologists Teachers Special Support Assistants Care Workers Social Workers Play Therapists Others None *Please specify_____*	❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑

8. In your opinion do individuals on your caseload receive help with social communication?

always	often	Rarely	Not at all
❑	❑	❑	❑

If "not at all" please go on to number 13.

9. Which types of support are provided for children to help them with their social communication? Also indicate who provides this support.

None ❑ *(tick which professionals provide what support - if other please specify)*

	Social Communication group	Individual programme	Advice To others	Role modelling	other	other
Speech and language therapist						
Teacher						
Educational psychologist						
Clinical psychologist						
Special support assistant						
Care workers						
Social worker						
Play therapist						
other						
other						

10. Which types of support are provided for relatives/carers to help them with their child's social communication? Also indicate who provides this support.

None ☐   (if none then go on to question 13)
                  (tick which professionals provide what support - if other please specify)

	Verbal advice	Written advice	other	other
Speech and language therapist				
Teacher				
Educational psychologist				
Clinical psychologist				
Special support assistant				
Care workers				
Social worker				
Play therapist				
other				
other				

11. Do you feel that the support currently provided is sufficient?

   Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

12. Do you feel that social communication improves with this support?

   Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

282

13. Please read the following scenarios and complete what course of action you would recommend. There is no right or wrong answer to these questions.

13a. Joe is ten years old. He is diagnosed as having Autistic Spectrum Disorder and Attention Deficit Disorder. He has an IQ of 95. His understanding of language is in line with his cognitive abilities. He has good numeracy and literacy skills. Joe finds it hard to make friends and often gets into trouble for arguing and storming off. His volume of speech is poor and he talks at a very rapid rate. He rarely makes eye contact and is reluctant to initiate a conversation.

Refer to Speech and Language Therapy	❑
Refer to Psychology	❑
Refer to other	❑
No specific action necessary	❑
In house discussions	❑
Managed adequately in normal routines	❑
Other	❑

Please give a brief reason your decision

_____

_____

_____

13b. James is fifteen years old. His language skills are moderately impaired. He is diagnosed as having moderate learning difficulties. He is shy and avoids having conversations. He has very few friends and very low self esteem. He communicates better with adults than with his peers.

Refer to Speech and Language Therapy	❑
Refer to Psychology	❑
Refer to other	❑
In house discussions	❑
Managed adequately in normal routines	❑
No specific action necessary	❑
Other	❑

Please give a brief reason your decision

_____

_____

_____

283

13c. Gill is nine years old. She is diagnosed as having moderate learning difficulties and Attention Deficit Disorder. Her numeracy , literacy skills and language skills are moderately behind that expected for her age. She has several friends within school. She does not like to be wrong and finds it very hard to play games as she hates to lose. She constantly interrupts during lessons and gets very angry if challenged. She can become very aggressive verbally and sometimes physically.

Refer to Speech and Language Therapy	❑
Refer to Psychology	❑
Refer to other	❑
In house discussions	❑
Managed adequately in normal routines	❑
No specific action necessary	❑
Other	❑

Please give a brief reason your decision

_____

_____

_____

13d. Sue is twelve years old. She has an IQ of 46. Her language skills are significantly behind that expected for her age but in line with her cognitive levels. She is very chatty and although her conversations are only about her own interests she tries very hard to initiate and carry out a conversation. She has appropriate eye contact, turn taking, facial expression and tone of voice.

Refer to Speech and Language Therapy	❑
Refer to Psychology	❑
Refer to other	❑
In house discussions	❑
Managed adequately in normal routines	❑
No specific action necessary	❑
Other	❑

Please give a brief reason your decision

_____

_____

_____

Questionnaire 2 – Educational Psychologists

A Survey of
Provision for Students
with Social Communication
Deficits.

All answers will be dealt with in
strict confidence.
Please tick the relevant boxes. The
questionnaire will take
approximately
ten minutes to complete.
If there is more than one "other"
answer then please continue on an
additional sheet clearly marking
which question the answer relates
to.

1.	Where do you work?	School	☐
		Clinic	☐
		Hospital	☐
		Individual's home	☐
		Residential setting	☐
		Other	☐
	(tick all that apply)		
		Please specify_____	

2.	What client groups do you work with?	Moderate Learning Difficulties	☐
		Severe Learning Difficulties	☐
		Autistic Spectrum Disorders	☐
		Attention Deficit disorders	☐
		Emotional Behavioural difficulties	☐
		Specific Language Impairment	☐
		Other	☐
	(tick all that apply)		
		Please specify_____	

3.	What age groups do you work with?	Pre-school (ages 0-4)	☐
		Primary (ages 5-11)	☐
		Secondary (ages 11-16)	☐
		16 +	☐
	(tick all that apply)		

4. How would you define social communication?

_____

_____

_____

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_____

_____

_____

_____

_____

5. How many children are on your case load? ☐

Of these how many have social communication deficits? ☐

6. When working with individuals who have social communication deficits, which other professionals do you consult with?

Speech & Language Therapists	☐
Occupational Therapists	☐
Physiotherapists	☐
Educational Psychologists	☐
Clinical Psychologists	☐
Teachers	☐
Special Support Assistants	☐
Care Workers	☐
Social Workers	☐
Play Therapists	☐
Others	☐
None	☐

(tick all that apply)

Please specify_____

7. In your opinion do individuals on your caseload receive help with social communication?

| always | Mostly | Rarely | Not at all | unsure |
| ☐ | ☐ | ☐ | ☐ | ☐ |

If "not at all" please go on to number 12.

8. Which types of support are provided for children to help them with their social communication? Also indicate who provides this support.

None ☐　*(tick which professionals provide what support - if other please specify)*

	Social Communication group	Individual programme	Advice To others	Role modelling	other	other
Speech and language therapist						
teacher						
Educational psychologist						
Clinical psychologist						
Special support assistant						
Care workers						
Social worker						
Play therapist						
other						
other						

287

9. Which types of support are provided for relatives/carers to help them with their child's social communication? Also indicate who provides this support.

None ☐ (if none then go on to question 12)
(tick which professionals provide what support - if other please specify)

	Verbal advice	Written advice	other	other
Speech and language therapist				
teacher				
Educational psychologist				
Clinical psychologist				
Special support assistant				
Care workers				
Social worker				
Play therapist				
other				
other				

10. Do you feel that the support currently provided is sufficient?

Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

11. Do you feel that social communication improves with this support?

Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

288

Please read the following case summaries and complete what course of action you would recommend. There is no right or wrong answer to these questions.

12a. Joe is ten years old. He is diagnosed as having Autistic Spectrum Disorder and Attention Deficit Disorder. He has an IQ of 95. His understanding of language is in line with his cognitive abilities. He has good numeracy and literacy skills. Joe finds it hard to make friends and often gets into trouble for arguing and storming off. His volume of speech is poor and he talks at a very rapid rate. He rarely makes eye contact and is reluctant to initiate a conversation.

Refer to Speech and Language Therapy	❑
Refer to other	❑
No specific action necessary	❑
Intervention	❑

Please provide a brief reason

_____

_____

_____

12b. James is fifteen years old. His language skills are moderately impaired. He is diagnosed as having moderate learning difficulties. He is shy and avoids having conversations. He has very few friends and very low self esteem. He communicates better with adults than with his peers.

Refer to Speech and Language Therapy	❑
Refer to other	❑
No specific action necessary	❑
Intervention	❑

Please provide a brief reason

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289

12c.	Gill is nine years old. She is diagnosed as having moderate learning difficulties and Attention Deficit Disorder. Her numeracy , literacy skills and language skills are moderately behind that expected for her age. She has several friends within school. She does not like to be wrong and finds it very hard to play games as she hates to lose. She constantly interrupts during lessons and gets very angry if challenged. She can become very aggressive verbally and sometimes physically.

Refer to Speech and Language Therapy ❑
Refer to other ❑
No specific action necessary ❑
Intervention ❑

Please provide a brief reason

_____

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_____

12d	Sue is twelve years old. She has an IQ of 46. Her language skills are significantly behind that expected for her age but in line with her cognitive levels. She is very chatty and although her conversations are only about her own interests she tries very hard to initiate and carry out a conversation. She has appropriate eye contact, turn taking, facial expression and tone of voice.

Refer to Speech and Language Therapy ❑
Refer to other ❑
No specific action necessary ❑
Intervention ❑

Please provide a brief reason

_____

_____

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290

Questionnaire 3 – Speech & Language Therapists

A Survey of
Provision for Students
with Social Communication
Deficits.

All answers will be dealt with in
strict confidence.
Please tick the relevant boxes. The
questionnaire will take approximately
ten minutes to complete.
If there is more than one "other"
answer then please continue on an
additional sheet clearly marking
which question the answer relates to.

1.	Where do you work?	School	❑
		Clinic	❑
		Hospital	❑
		Individual's home	❑
		Residential setting	❑
		Other	❑
	(tick all that apply)		
		Please specify_____	

2.	What client groups do you work with?	Moderate Learning Difficulties	❑
		Severe Learning Difficulties	❑
		Autistic Spectrum Disorders	❑
		Attention Deficit Disorders	❑
		Emotional Behavioural Difficulties	❑
		Specific Language Impairment	❑
		Other	❑
	(tick all that apply)		
		Please specify_____	

3.	What age groups do you work with?	Pre-school (ages 0-4)	❑
		Primary (ages 5-11)	❑
		Secondary (ages 11-16)	❑
		16 +	❑
	(tick all that apply)		

4. How would you define social communication?

_____

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_____

_____

5. How many children/young people are on your case load? ☐

Of these how many have social communication deficits? ☐

6. When working with individuals who have social communication deficits, which other professionals do you consult with?

Speech & Language Therapists	☐
Occupational Therapists	☐
Physiotherapists	☐
Educational Psychologists	☐
Clinical psychologists	☐
Teachers	☐
Special Support Assistants	☐
Care Workers	☐
Social Workers	☐
Play Therapists	☐
Others	☐
None	☐

(tick all that apply)

Please specify_____

7. In your opinion do individuals on your caseload receive help with social communication?

Always	Mostly	Rarely	Not at all	unsure
☐	☐	☐	☐	☐

If "not at all" please go on to number 12.

8. Which types of support are provided for children/young people to help them with their social communication? Also indicate who provides this support.

None ☐ *(tick which professionals provide what support - if other please specify)*

	Social Communication group	Individual programme	Advice To others	Role modelling	other	other
Speech and language therapist						
Teacher						
Educational psychologist						
Clinical psychologist						
Special support assistant						
Care workers						
Social worker						
Play therapist						
other						
other						

9. Which types of support are provided for relatives/carers to help them with their child's social communication? Also indicate who provides this support.

None ☐ (if none then go on to question 12)
(tick which professionals provide what support - if other please specify)

	Verbal advice	Written advice	other	other
Speech and language therapist				
Teacher				
Educational psychologist				
Clinical psychologist				
Special support assistant				
Care workers				
Social worker				
Play therapist				
other				
other				

10. Do you feel that the support currently provided is sufficient?

Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

11. Do you feel that social communication improves with this support?

Yes ☐   No ☐   Unsure ☐

Please expand on your answer

_____

_____

294

12.	Please read the following case summaries and complete what course of action you would recommend. There is no right or wrong answer to these questions.

12a. Joe is ten years old. He is diagnosed as having Autistic Spectrum Disorder and Attention Deficit Disorder. He has an IQ of 95. His understanding of language is in line with his cognitive abilities. He has good numeracy and literacy skills. Joe finds it hard to make friends and often gets into trouble for arguing and storming off. His volume of speech is poor and he talks at a very rapid rate. He rarely makes eye contact and is reluctant to initiate a conversation.

Individual therapy	❏
Individual programme	❏
Social communication group run by S.L.T	❏
Social communication group run by someone other than S.L.T	❏
No intervention	❏
Advice to teaching staff	❏
Advice to parents	❏
Referral to other agency	❏
Other	❏

Please provide a brief reason

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12b. James is fifteen years old. His language skills are moderately impaired. He is diagnosed as having moderate learning difficulties. He is shy and avoids having conversations. He has very few friends and very low self esteem. He communicates better with adults than with his peers.

No intervention	❏
Social communication group run by someone other than S.L.T	❏
Social communication group run by S.L.T	❏
Individual therapy	❏
Referral to other agency	❏
Individual programme	❏
Advice to teaching staff	❏
Advice to parents	❏
Other	❏

Please provide a brief reason

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12c. Gill is nine years old. She is diagnosed as having moderate learning difficulties and Attention Deficit Disorder. Her numeracy , literacy skills and language skills are moderately behind that expected for her age. She has several friends within school. She does not like to be wrong and finds it very hard to play games as she hates to lose. She constantly interrupts during lessons and gets very angry if challenged. She can become very aggressive verbally and sometimes physically.

Social communication group
run by S.L.T   ❑
Individual programme   ❑
Individual therapy   ❑
Advice to parents   ❑

Social communication group
run by someone other than S.L.T   ❑
Advice to teaching staff   ❑
Referral to other agency   ❑
No intervention   ❑
Other   ❑

Please provide a brief reason

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12d   Sue is twelve years old. She has an IQ of 46. Her language skills are significantly behind that expected for her age but in line with her cognitive levels. She is very chatty and although her conversations are only about her own interests she tries very hard to initiate and carry out a conversation. She has appropriate eye contact, turn taking, facial expression and tone of voice.

Individual therapy	❑
No intervention	❑
Individual programme	❑
Advice to parents	❑
Social communication group run by S.L.T	
Referral to other agency	❑
Social communication group run by someone other than S.L.T	❑
Advice to teaching staff	❑
Other	❑

Please provide a brief reason

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12e.   Tom is eleven years old. He is diagnosed as having Autistic Spectrum Disorder and Moderate Learning Difficulties. He has significant comprehension difficulties. Although his expressive vocabulary is good he has disordered grammar. He finds it difficult to understand social situations and can become easily upset. He misreads people's emotions and takes what people say very literally.

Individual programme	❑
Social communication group run by someone other than S.L.T	❑
Advice to teaching staff	❑
Referral to other agency	❑
Individual therapy	❑
No intervention	❑
Advice to parents	❑
Social communication group run by S.L.T	❑
Other	❑

Please provide a brief reason

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Appendix 9 – Invitation for SALTs to participate in focus group

Dear   ,

I am writing to you in relation to my research study looking at the provision for those with social communication deficits.

Some time ago you completed and returned a questionnaire for which I am very grateful. Enclosed with this you very kindly gave your consent to be invited to participate in a focus group. I am now at the stage of arranging these focus groups and the attached document provides you with the appropriate details. I very much hope you are able to attend. Please would you confirm your attendance via e mail. I will send you a map and directions and an outline of the aims of the focus group nearer the time.

Kind regards your time is much appreciated,

Jude Brown (Speech and Language Therapist)

P.S If you have any queries or require any further information then please do not hesitate to contact me via e mail or on

Focus Group Invitation

Time: 12.00 for lunch (provided), 1.00pm focus group start.

Location:

Duration: aprox 1 – 2 hours (depending on how much the group wants to talk!).

Number of participants:

10 participants have been invited.

Judith Brown (Speech and Language Therapist)

Pontville School

Appendix 10 – Details of focus group participants

	Focus group participants		
Therapist	**Employer**	**Place of work**	**Experience**
1	NHS Trust	Clinic and Mainstream support	Basic grade
2	NHS Trust	Mainstream Primary School, specialist unit	Highly Specialist
3	NHS Trust	Mainstream Primary School, specialist unit	Specialist
4	NHS Trust	Clinic and Mainstream support	Basic grade
5	NHS Trust	Clinic and specialist diagnostic team	Highly Specialist
6	NHS Trust	Local Authority Special School	Specialist
7	Independent Special School	Independent Special School	Newly qualified
8	NHS Trust	Clinic and specialist diagnostic team	Highly Specialist
9	NHS Trust	Clinic and Child Development Centre.	Highly Specialist
10	NHS Trust	Clinic and Mainstream support	Basic grade
11	NHS Trust	Mainstream Primary School, specialist unit	Specialist
12	NHS Trust	Mainstream Primary School, specialist unit	Specialist
13	Independent Special School	Independent Special School	Highly Specialist
14	Independent Special School	Independent Special School	Specialist
15	NHS Trust	Mainstream Primary School, specialist unit	Specialist
16	NHS Trust	Clinic and Child Development Centre.	Highly Specialist
17	NHS Trust	Clinic and Mainstream support	Basic grade
18	NHS Trust	Clinic and Mainstream support	Basic grade
19	NHS Trust	Mainstream Primary School, specialist unit	Specialist
20	NHS Trust	Clinic and Mainstream support	Basic grade
21	NHS Trust	Clinic and Mainstream support	Basic grade
22	NHS Trust	Local Authority Special School	Specialist
23	Independent Special School	Independent Special School	Specialist
24	NHS Trust	Clinic and Mainstream support	Basic grade
25	NHS Trust	Local Authority Special School	Specialist
26	NHS Trust	Local Authority Special School	Specialist
27	NHS Trust	Mainstream Secondary School, specialist unit	Specialist
28	NHS Trust	Local Authority Special School	Specialist
29	NHS Trust	Clinic and Child Development Centre.	Highly Specialist

Focus Group Topic Guide

What are Social communication deficits?

Are Social communication deficits the same as pragmatic deficits?

Are there different types of social communication deficits?

Are all social communication deficits worthy of intervention? Is it dependent upon primary diagnosis?

What assessments are used to create a profile of social communication deficits?

What do therapists offer to address the needs of children with Social communication deficits?

What is thought to be current best practice for these children?

What areas of communication would be key areas to work on?

What sort of intervention/therapy techniques are most widely used?

How are skills taught, maintained and generalised?

How is progress/effectiveness measured

Appendix 12 – Semi-structured interview information and topic guide

<div style="border:1px solid black;">

Interview Information and topic guide

</div>

Thank you for participating in this focus group. The next phase of my research project is to look into more detail at the type of intervention models that are being used to support individuals with social communication deficits.

This phase, therefore, involves conducting semi-structured interviews with Speech and Language Therapists who are implementing strategies within their clinical setting.

If you are working with individuals with social communication deficits and feel that your input would be valuable to this study I would be grateful if you would provide your consent to be interviewed.

What will be involved?

- The researcher will conduct the interview at a venue that is convenient for you.
- The interview will last no longer than 45 minutes.
- The interview will be tape recorded (this will be destroyed at the end of the project).
- You will be invited to keep a reflective journal as follow up to your interview. (This will be optional and will require additional consent).

Topics to be included
- A description of your model
- How you would assess social communication
- The benefit of your model
- Possible improvements of your intervention/limitations
- Knowledge/evidence base
- Decision making

Should you have any further questions then please do not hesitate to contact me. Thank you for your help,

Jude

Judith Brown (Speech and Language Therapist)

Appendix 13 – Table of search strategy

SEARCH TERMS	"Quick Search" Number found	"Quick Search" Number retrieved	"Quick Search" Number relevant	cochrane Number found	cochrane Number relevant
"social communication"	14510	300	36	0	0
"social communication" AND autism	1362	186	42	15	9
"social communication" AND Learning disability	36	33	9	0	0
"social communication" AND Learning difficulties	16	16	8	0	0
"social communication" AND behaviour	670	155	12	4	2
"social communication" AND pragmatics	1181	69	25	0	0
"social communication" AND intervention	1175	182	51	7	3
"social communication" AND "Speech and language"	49	45	21	0	0
"social communication" AND "intellectual ability"	2	2	0	0	0

SEARCH TERMS	"Quick Search" Number found	"Quick Search" Number retrieved	"Quick Search" Number relevant	cochrane Number found	cochrane Number relevant
linguistics	451427	284	14	94	6
linguistics AND pragmatics	26001	186	20	0	0
linguistics AND models	85741	232	1	1	0
linguistics AND terminology	14269	180	3	0	0

SEARCH TERMS	"Quick Search" Number found	"Quick Search" Number retrieved	"Quick Search" Number relevant	Cochrane Number found	Cochrane Number relevant
"developmental psychology"	127686	257	19	94	5
"developmental psychology" AND narrative	228	89	4	2	0
"developmental psychology" AND Social development	310	82	11	0	0
"developmental psychology" AND Social codes	0	0	0	0	0
"developmental psychology" AND language	177307	279	15	1	0
"developmental psychology" AND Language development	86415	275	17	0	0

SEARCH TERMS	"Quick Search" Number found	"Quick Search" Number retrieved	"Quick Search" Number relevant	cochrane Number found	cochrane Number relevant
pragmatics	54955	275	22	9	5
pragmatics AND disorder	54955	206	41	3	3
pragmatics AND intervention	4632	208	23	2	2

Appendix 14 – Table of social communication domains

Sub - section	Social Communication Domain	Reference source
L	Inferential aspects of language	Jolliffe & Baron- Cohen 1999
L	Irony	Jolliffe & Baron- Cohen 1999 Kaland et al 2011
L	Metaphoric language	Jolliffe & Baron- Cohen 1999 Kaland et al 2011
L	Understanding communicative intentions	Marans, Rubin and Laurent 2005
L	Modifying interpretation of ambiguity	Marans, Rubin and Laurent 2005
L	Understanding jokes and sarcasm	Olswang et al 2001
L	Language understanding	Landa et al 2011
L	Listening and understanding others	Dahlberg et al 2007
L	Production of adjectives and verbs in sentences and phrases	Cridland 2008, book review of Hedge 2006
L	"mands"- requests, demands and various forms of questions	Cridland 2008, book review of Hedge 2006
L	Negative sentences	Cridland 2008, book review of Hedge 2006
L	Passive sentences	Cridland 2008, book review of Hedge 2006
L	Understanding intentions	Kaland et al 2011
PV	Other peoples intentions	Jolliffe & Baron- Cohen 1999
PV	Joint attention	Charman 2011 Jones & Schwartz 2009 Marans, Rubin and Laurent 2005 Rubin & Lennon 2004 Drew et al 2007 Jahromi et al 2009 Wetherby et al 2007
PV	Joint engagement	Drew et al 2007
PV	Imitation	Charman 2011 Drew et al 2007 Landa et al 2011
PV	Vocalisation	Drew et al 2007
PV	Turn-taking/ Sharing across turns/extended turn taking	Charman 2011 Marans, Rubin and Laurent 2005
PV	Non-verbal social communication exchange	Charman 2011 Dahlberg et al 2007
PV	Affect sharing/expression	Charman 2011 Landa et al 2011
PV	Engagement	Charman 2011
PV	Symbolic play/functional and pretend play	Jones & Schwartz 2009 Drew et al 2007
PV	Social intentions	Jones & Schwartz 2009 Rubin & Lennon 2004
PV	Gestures	Drew et al 2007
PV	Eye gaze/gaze shifts	Drew et al 2007 Wetherby et al 2007
PV	Symbol use/symbolic behaviour	Rubin & Lennon 2004 Landa et al 2011
PV	Prosody and intonation	Rubin & Lennon 2004
PV	Social affective signalling/shared affect	Landa et al 2011 Wetherby et al 2007

C	Conversational abilities/style/skills	Jones & Schwartz 2009
		Cridland 2008, book review of Hedge 2006
C	Social reciprocity	Gilmour et al 2004
		Jones & Schwartz 2009
		Landa et al 2011
C	Responding to bids	Jones & Schwartz 2009
C	Maintaining information	Marans, Rubin and Laurent 2005
C	Repairing communication	Marans, Rubin and Laurent 2005
C	Requesting behaviours; gives, reaches, points to request, verbal requests	Jahromi et al 2009
C	Negotiating conflicts with peers	Olswang et al 2001
C	Using polite forms	Olswang et al 2001
C	Rules of communicating	Wetherby et al 2007
C	Acts of social interaction	Wetherby et al 2007
C	Giving and interpreting	Dahlberg et al 2007
C	Following social boundaries and rules	Dahlberg et al 2007
C	Social blunders	Kaland et al 2011
A	Social isolation	Jones & Schwartz 2009
A	Repetitive rituals	Jones & Schwartz 2009
B	Interpreting thoughts and behaviours of others	Olswang et al 2001
B	Hostile/coercive behaviour	Olswang et al 2006
B	Pro-social/engaged behaviour	Olswang et al 2006
B	Assertive behaviour	Olswang et al 2006
		Dahlberg et al 2007
B	Passive/disengaged behaviour	Olswang et al 2006
B	Adult seeking behaviour	Olswang et al 2006
B	Acts of behaviour regulation	Wetherby et al 2007
E	Explaining thoughts and behaviours	Olswang et al 2001
E	Emotional recognition	Wainer and Ingersoll 2011
E	Communicating need and thoughts	Dahlberg et al 2007
E	Regulating emotions	Dahlberg et al 2007
E	Understanding contrary emotions	Kaland et al 2011
E	Understanding jealousy	Kaland et al 2011

The domains have been grouped into the following sub-sections;

- **Linguistic (L)**

- **Pre-verbal (PV)**

- **Conversation (C)**

- **Atypical (A)**

- **Behavioural (B)**

- **Emotional (E).**

Appendix 15 – Table of pragmatic domains

Sub - section	Pragmatic Domain	Reference source	Cited by
PV	Turn taking	McTear (1985) Adams (2006) Adams and Lloyd (2007) Richardson and Klecan-Aker (2000) Ninio & Bruner (1978)	Adams (2002:973) Adams (2002:973)
C	Relevance /appropriate comments	McTear 1985 Richardson and Klecan-Aker (2000) Volden et al (2009) Lloyd et al (1995)	Adams (2002:973)
C	Conversation repair Turn taking repair	McTear (1985) Ervin and Tripp (1977)	Adams (2002:973)
L	Social Inferences/inferred meaning	Lui et al, (1997) Adams (2006) Adams and Lloyd (2007) Paris and Upton (1976) Eson and Sharpiro (1982)	Adams (2002:973) Adams (2002:973)
L	Idiom comprehension	Kerbal and Grunwell (1998) Spector (1996)	Adams (2002:973)
C	Attention-getting devises	McTear (1985)	
L	Establishing references	McTear 1985 Karmiloff-Smith (1985)	Adams (2002:973)
C	Context	Bara et al (1999) Adams (2006) Rinaldi (2000) Crystal (1987) Guerts and Embrachts (2010) Martin and McDonald (2003)	
C	Spontaneous conversation	Richardson and Klecan-Aker (2000) Adams (2006) Adams and Lloyd (2007)	
C	Starting maintaining and ending conversations,	Richardson and Klecan-Aker (2000)	
	Asking for help	Richardson and Klecan-Aker (2000)	
E	Internal responses (emotions)	Richardson and Klecan-Aker (2000)	
L	Labelling	Richardson and Klecan-Aker (2000)	
L	Description of objects	Richardson and Klecan-Aker (2000)	
C	Topic maintenance in conversation	Richardson and Klecan-Aker (2000) Ervin and Tripp (1977)	Adams(2002:973)

		Volden et al (2009) Adams and Lloyd (2007)	
PV	Pre-verbal communicative intentions/proto-words	Coggins & Carpenter, 1981	Adams(2002:973)
C	Making clarifications	Gallagher, 1977; Ferrier et al., 2000	Adams(2002:973)
C	Listener awareness	Dunn & Kendrick, 1982 Adams (2006) Adams and Lloyd (2007)	Adams(2002:973)
C	Manners/ polite forms	Bates et al., 1979 McTear & Conti-Ramsden (1992)	Adams(2002:973) McTear & Conti-Ramsden, 1992
L	Narrative skills	Liles, 1993 Adams (2006) Adams and Lloyd (2007)	Adams(2002:973)
L	Sentence formulation	Adams (2006)	
L	Sentence recall	Adams (2006)	
L	interpersonal use of language	Adams (2006) Adams (2002)	
C	verbose	Adams (2006) Adams and Lloyd (2007)	
L	Interpreting subtle language meaning	Adams (2006)	
	Social understanding	Adams (2006)	
	Social role play	Adams (2006)	
A	Talk about their own pre-occupations	Adams and Lloyd (2007)	
L	Ambiguous/literal/figurative language	Adams and Lloyd (2007) Guerts and Embrecht (2010)	
L	Comprehending discourse	Adams and Lloyd (2007)	
	Social cognition	Adams and Lloyd (2007)	
C	Topic initiation	Volden et al (2009)	
PV	Non-verbal communication	Ramberg (1996)	
PV	Prosody	Ramberg (1996)	
L	Interpret meaning	Rinaldi (2000)	

The domains have been grouped into the same sub-sections;

- **Linguistic (L)**

- **Pre-verbal (PV)**

- **Conversation (C)**

- **Atypical (A)**

- **Behavioural (B)**

- **Emotional (E).**

Appendix 16 – Content analysis tables

Descriptors	Frequency by SALTs	Descriptors	Frequency by Teachers	Descriptors	Frequency by EPs
Acceptable	1	Acceptable	2	Acceptable	0
Apply	0	Apply	1	Apply	0
Appropriately	6	Appropriately	2	Appropriately	1
Aware	4	Aware	3	Aware	0
Body language	7	Body language	5	Body language	2
Body movements	0	Body movements	1	Body movements	0
Communicative intent	0	Communicative intent	1	Communicative intent	0
Compliments	0	Compliments	1	Compliments	0
Compromise	0	Compromise	1	Compromise	0
Connect	1	Connect	0	Connect	0
Context	5	Context	3	Context	3
Conversation	7	Conversation	2	Conversation	1
Convey	2	Convey	0	Convey	4
Criticism	0	Criticism	1	Criticism	0
Desires	1	Desires	3	Desires	0
Effective/Effectively	3	Effective/Effectively	4	Effective/Effectively	2
Emotional literacy	0	Emotional literacy	0	Emotional literacy	1
Empathy	2	Empathy	1	Empathy	2
Etiquette	0	Etiquette	0	Etiquette	1
Everyday situations	1	Everyday situations	0	Everyday situations	0
Exchange	1	Exchange	3	Exchange	0
Expressions	1	Expressions	1	Expressions	0
Expressive	0	Expressive	1	Expressive	4
Eye contact	9	Eye contact	4	Eye contact	2
Facial expression	6	Facial expression	4	Facial expression	4
Feelings	0	Feelings	4	Feelings	0
Friends	1	Friends	0	Friends	1
Functionality	0	Functionality	0	Functionality	0
Gestures	0	Gestures	1	Gestures	1
Giver	0	Giver	1	Giver	0
Greet	1	Greet	0	Greet	0
Group	1	Group	4	Group	3
How to speak	0	How to speak	1	How to speak	0
Humour	0	Humour	1	Humour	0
Inferences	0	Inferences	1	Inferences	0
Initiate	0	Initiate	3	Initiate	0
Innate	0	Innate	0	Innate	1
Instructions	0	Instructions	2	Instructions	0
Intentions	1	Intentions	1	Intentions	0
Interaction	8	Interaction	7	Interaction	3
Interpersonal	0	Interpersonal	0	Interpersonal	0

Interpret	2	Interpret	2	Interpret	1
Joint attention	1	Joint attention	0	Joint attention	1
Joint reference	1	Joint reference	0	Joint reference	0
Knowledge	4	Knowledge	0	Knowledge	0
Listen/listening	4	Listen/listening	7	Listen/listening	1
Literal/inferred meaning	1	Literal/inferred meaning	0	Literal/inferred meaning	0
Maintain	1	Maintain	1	Maintain	0
Manner	1	Manner	4	Manner	0
Meeting	0	Meeting	2	Meeting	0
Messages	0	Messages	3	Messages	2
Motivation	0	Motivation	0	Motivation	1
Mutual	1	Mutual	0	Mutual	0
Naturally	2	Naturally	0	Naturally	0
Needs	5	Needs	7	Needs	3
Negotiation	0	Negotiation	0	Negotiation	1
Opinions	1	Opinions	3	Opinions	2
Participate	0	Participate	2	Participate	0
Peers	3	Peers	3	Peers	0
Perceived/Perceiving	1	Perceived/Perceiving	0	Perceived/Perceiving	1
Perception	0	Perception	0	Perception	1
Personal space	1	Personal space	1	Personal space	0
Phone	0	Phone	1	Phone	0
Pleasure	1	Pleasure	0	Pleasure	0
Posture	1	Posture	2	Posture	0
Pragmatic	5	Pragmatic	0	Pragmatic	2
Processing	0	Processing	0	Processing	1
Prosody	1	Prosody	0	Prosody	0
Proximity	2	Proximity	0	Proximity	0
Purposes	2	Purposes	1	Purposes	1
Receiver	0	Receiver	1	Receiver	0
Receptive	0	Receptive	1	Receptive	0
Reciprocal	0	Reciprocal	0	Reciprocal	1
Relationships	1	Relationships	0	Relationships	1
Relevant	2	Relevant	0	Relevant	0
Repair/Repairing	2	Repair/Repairing	1	Repair/Repairing	0
Requesting	0	Requesting	0	Requesting	1
Respond/Responding	0	Respond/Responding	4	Respond/Responding	1
Rules	7	Rules	0	Rules	1
Satisfaction	1	Satisfaction	0	Satisfaction	0
Self reflect	0	Self reflect	0	Self reflect	0
Self-awareness	0	Self-awareness	0	Self-awareness	0
Semantic	0	Semantic	0	Semantic	0
Share	1	Share	1	Share	0
Signals	0	Signals	2	Signals	1

Social cue	0	Social cue	0	Social cue	0
Social life	0	Social life	1	Social life	0
Social norms	0	Social norms	2	Social norms	0
Social situation	0	Social situation	1	Social situation	0
Socialise	1	Socialise	1	Socialise	0
Socially	1	Socially	3	Socially	1
Speaking	0	Speaking	2	Speaking	0
Strategies	0	Strategies	1	Strategies	0
Successful	2	Successful	2	Successful	0
Sustaining	0	Sustaining	0	Sustaining	1
Taking turns	0	Taking turns	1	Taking turns	2
Theory of mind	0	Theory of mind	0	Theory of mind	2
Tolerance	0	Tolerance	1	Tolerance	0
Tone of voice	3	Tone of voice	1	Tone of voice	0
Topic maintenance	2	Topic maintenance	0	Topic maintenance	0
Transmitted	1	Transmitted	0	Transmitted	0
Understand	11	Understand	10	Understand	11
Use of language	0	Use of language	1	Use of language	1
Verbal and non-verbal	8	Verbal and non-verbal	7	Verbal and non-verbal	3
Views	3	Views	3	Views	0
Volume	4	Volume	0	Volume	0
Wants	0	Wants	1	Wants	0
With others	8	With others	10	With others	1

Appendix 17 – Semi-structured interview questions

Interview Questions

Are you currently working with pupils with social communication difficulties?

Can you describe your model of intervention?

How old are the children you are working with?

Can you tell me how you assess social communication and create a social communication profile?

Do you feel that your intervention model is beneficial?

How do you measure effectiveness?

How do you allow for generalisation/transference of skills?

Do you think that your intervention can be improved?

Do you think that there are any limitations of your interventions?

Is your intervention based on any theoretical knowledge/evidence base?

What made you decide on this form of intervention?

Appendix 18 – DSM-V social communication criteria

Changes made to the DSM-5 diagnostic criteria and texts are outlined in this chapter in the same order in which they appear in the DSM-5 classification. This is not an exhaustive guide; minor changes in text or wording made for clarity are not described here. It should also be noted that Section I of DSM-5 contains a description of changes pertaining to the chapter organization in DSM-5, the multiaxial system, and the introduction of dimensional assessments (in Section III).

Terminology

The phrase "general medical condition" is replaced in DSM-5 with "another medical condition" where relevant across all disorders.

Neurodevelopmental Disorders

Intellectual Disability (Intellectual Developmental Disorder)

Diagnostic criteria for intellectual disability (intellectual developmental disorder) emphasize the need for an assessment of both cognitive capacity (IQ) and adaptive functioning. Severity is determined by adaptive functioning rather than IQ score. The term mental retardation was used in DSM-IV. However, *intellectual disability* is the term that has come into common use over the past two decades among medical, educational, and other professionals, and by the lay public and advocacy groups. Moreover, a federal statue in the United States (Public Law 111-256, Rosa's Law) replaces the term "mental retardation with intellectual disability. Despite the name change, the deficits in cognitive capacity beginning in the developmental period, with the accompanying diagnostic criteria, are considered to constitute a mental disorder. The term *intellectual developmental disorder* was placed in parentheses to reflect the World Health Organization's classification system, which lists "disorders" in the International Classification of Diseases (ICD; ICD-11 to be released in 2015) and bases all "disabilities" on the International Classification of Functioning, Disability, and Health (ICF). Because the ICD-11 will not be adopted for several years, *intellectual disability* was chosen as the current preferred term with the bridge term for the future in parentheses.

Communication Disorders

The DSM-5 communication disorders include language disorder (which combines DSM-IV expressive and mixed receptive-expressive language disorders), speech sound disorder (a new name for phonological disorder), and childhood-onset fluency disorder (a new name for stuttering). Also included is social (pragmatic) communication disorder, a new condition for persistent difficulties in the social uses of verbal and nonverbal communication. Because social communication deficits are one component of autism spectrum disorder (ASD), it is important to note that social (pragmatic) communication disorder cannot be diagnosed in the presence of restricted repetitive behaviors, interests, and activities (the other component of ASD). The symptoms of some patients diagnosed with DSM-IV pervasive developmental disorder not otherwise specified may meet the DSM-5 criteria for social communication disorder.

Autism Spectrum Disorder

Autism spectrum disorder is a new DSM-5 name that reflects a scientific consensus that four previously separate disorders are actually a single condition with different levels of symptom severity in two core

domains. ASD now encompasses the previous DSM-IV autistic disorder (autism), Asperger's disorder, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified. ASD is characterized by 1) deficits in social communication and social interaction and 2) restricted repetitive behaviors, interests, and activities (RRBs). Because both components are required for diagnosis of ASD, social communication disorder is diagnosed if no RRBs are present.

Attention-Deficit/Hyperactivity Disorder

The diagnostic criteria for attention-deficit/hyperactivity disorder (ADHD) in DSM-5 are similar to those in DSM-IV. The same 18 symptoms are used as in DSM-IV, and continue to be divided into two symptom domains (inattention and hyperactivity/impulsivity), of which at least six symptoms in one domain are required for diagnosis. However, several changes have been made in DSM-5: 1) examples have been added to the criterion items to facilitate application across the life span; 2) the cross-situational requirement has been strengthened to "several" symptoms in each setting; 3) the onset criterion has been changed from "symptoms that caused impairment were present before age 7 years" to "several inattentive or hyperactive-impulsive symptoms were present prior to age 12"; 4) subtypes have been replaced with presentation specifiers that map directly to the prior subtypes; 5) a comorbid diagnosis with autism spectrum disorder is now allowed; and 6) a symptom threshold change has been made for adults, to reflect their substantial evidence of clinically significant ADHD impairment, with the cutoff for ADHD of five symptoms, instead of six required for younger persons, both for inattention and for hyperactivity and impulsivity. Finally, ADHD was placed in the neurodevelopmental disorders chapter to reflect brain developmental correlates with ADHD and the DSM-5 decision to eliminate the DSM-IV chapter that includes all diagnoses usually first made in infancy, childhood, or adolescence.

Specific Learning Disorder

Specific learning disorder combines the DSM-IV diagnoses of reading disorder, mathematics disorder, disorder of written expression, and learning disorder not otherwise specified. Because learning deficits in the areas of reading, written expression, and mathematics commonly occur together, coded specifiers for the deficit types in each area are included. The text acknowledges that specific types of reading deficits are described internationally in various ways as dyslexia and specific types of mathematics deficits as dyscalculia.

Motor Disorders

The following motor disorders are included in the DSM-5 neurodevelopmental disorders chapter: developmental coordination disorder, stereotypic movement disorder, Tourette's disorder, persistent (chronic) motor or vocal tic disorder, provisional tic disorder, other specified tic disorder, and unspecified tic disorder. The tic criteria have been standardized across all of these disorders in this chapter. Stereotypic movement disorder has been more clearly differentiated from body-focused repetitive behavior disorders that are in the DSM-5 obsessive-compulsive disorder chapter.

Schizophrenia Spectrum and Other Psychotic Disorders

Schizophrenia

Two changes were made to DSM-IV Criterion A for schizophrenia. The first change is the elimination of the special attribution of bizarre delusions and Schneiderian first-rank auditory hallucinations (e.g., two or more voices conversing). In DSM-IV, only one such symptom was needed to meet the diagnostic requirement for Criterion A, instead of two of the other listed symptoms. This special attribution was

Appendix 19 – A worked example of assessment

The Speech and Language Therapist coordinates the assessment *The assessment is completed over a period of three weeks*	
The setting	**Assessment tools used**
Information collected in clinic	Observation, elicitation, filming
Information collected at school	Observation
Information collected at home	Observation
The people	**Assessment tools used**
Mum and dad	Structured interview, checklist (CCC-2)
Teacher	Structured interview, checklist (CCC-2)
Teaching assistant	Structured interview
The individual	**Assessment tools used**
Cognitive assessment	British Ability Scales (by an Educational Psychologist)
Language assessment	CELF or ACE
Social communication domains	Observation, elicitation, interview, filming, professional judgement, checklists.
Self-awareness	Observation, elicitation, interview, filming, professional judgement, checklists.
Social insight	Observation, elicitation, interview, filming, professional judgement, checklists.

Appendix 20 – A worked example of an intervention approach

The Speech and Language Therapist coordinates the intervention *The assessment is completed over a year*	
The individual	**Intervention strategies**
Specific skills from different social communication domains need to be taught explained and practised, for example, conversation skills, high level language skills and non-verbal skills.	• Group therapy • Individual sessions • Explaining • Filming • Modelling • Experiencing • Social stories
Self-awareness	• Rating • Experiencing • Observing • Feedback • Social stories
The setting	**Intervention strategies**
Specific skills need to be practised in real settings	• Organised activities to use skills • Collaboration with parents
Misunderstandings need to be addressed as they occur	• Social stories • Comic strip
Context needs explaining	• Social stories • Video • You tube clips
Structured feedback and self-reflection	• A reflective journal • Cartoon board
The people	**Intervention strategies**
Specific skills need to be practised with different people	• Organised activities to use skills
Staff awareness	• Staff training • Joint planning • Joint intervention • Modelling
Parental awareness	• Parental collaboration
Structured feedback	• Discussions • Social stories • Rating systems