Volume Two

A Collection of Professional Practice Reports

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CHAPTER ONE

Introduction

1.1 Overview

During years two and three of the Applied Educational and Child Psychology Doctorate at the University of Birmingham, I have been on placement with a Local Authority (LA) in the Midlands as a Trainee Educational Psychologist (TEP). In my dual role as a full-time post-graduate student and as a TEP I have been working towards meeting the doctoral course requirements and developing my professional practice skills.

This volume of my thesis forms the second of two distinct volumes of research to meet the requirements of the course. This volume provides:

- an overview of the contextual factors of the LA where I am currently on placement;
- a synopsis for each of the four Professional Practice Reports (PPR) I completed during my supervised professional practice over the past two years; and finally
- I conclude with a summary of my reflections on my own professional practice during my training.

1.2 Contextual factors

I am currently in my final year of a two year placement as a TEP with an Educational Psychology Service in Oakshire[1], a large county situated in the Midlands. Oakshire Educational Psychology Service comprises of four districts. During my placement I

[1] Oakshire is a pseudonym for the Local Authority in which this study was conducted

was the named TEP for a number of schools in a town called Fernston[2], which makes up half of one district within Oakshire. The supervised work I have undertaken in these schools has formed the basis for the four professional practice reports in this Volume of the thesis.

According to the 2011 consensus, Fernston has a population of just under 77,000 people. The majority of people are white British; only 2% of the population are from ethnic minority backgrounds.

There are thirty two mainstream primary schools in Fernston, one specialist primary school, five high schools and one specialist high school. The majority of my work has been carried out in early years settings (mainstream and specialist) and primary schools.

According to the most recent OFSTED reports for each mainstream primary school in Fernston, approximately 47% of schools have below the national average number of children on role with special educational needs, whilst approximately 13% of the schools have above average numbers of children on the special educational needs register.

In 2012, Fernston Council carried out a comprehensive profile of the town's population. Some of the key findings from this analysis which were relevant to my role as a TEP are:

[2] Fernston is a pseudonym for the town in which this study was conducted

- many sub-areas of Fernston fell within the most deprived fifth of areas in England, making up 17% (about 2,600 children) of the child population (aged under 16);
- in 2011, 49% of Fernston pupils achieved five or more A*-C grades at GCSE level including English and Maths. This is ten percentage points lower than the England average and seven percentage points lower than the Oakshire average;
- the proportion of children identified with some type of special educational need in Fernston is 21% (2,140 children). This is higher than the England average of 19%;
- the estimated numbers of adults suffering mental ill-health in Fernston is significantly lower than the national average; and
- around 15,600 people (20%) are defined as living in the most disadvantaged quintile nationally for geographical access to services.

1.3 Professional Practice Reports

Each Professional Practice Report (PPR) is a small-scale research project which offers an account of a sample of my work over the past two years. These research projects have been of personal and professional interest, relevant to my day-to-day role, and instrumental in developing my professional practice skills during my training. Table 1.1 provides an overview of the titles for each PPR and their location within this volume.

Table 1.1: PPR Titles

PPR	Title	Page
1	*A small-scale project to explore school staff's perceptions of effective factors and challenges in mainstream provision for a pupil with complex educational needs.*	12
2	*This paper considers the research into the application of psychological problem-solving frameworks in Educational Psychologist's practice, their usefulness and challenges. This paper is an example of how COMORIA was implemented, drawing upon the relevant theory that informed each of the key decision points.*	53
3	*This paper presents a review of social skills training literature to determine if social skills training would form the intervention of choice to support Key Stage One mainstream primary school children who were reportedly expressing social, emotional and/or behavioural difficulties?*	101
4	*A example of a case study which draws upon the principles of Dynamic Assessment, Feuerstein's theory of Structural Cognitive Modification and the principles of mediated learning to inform assessment and intervention.*	149

1.3.i PPR1: A small-scale project to explore school staff's perceptions of effective factors and challenges in mainstream provision for a pupil with complex educational needs.

This study aims to explore school staff's perceptions of effective factors and challenges surrounding provision for 'Emma', a Year 9 pupil with complex special educational needs (SEN), and to consider the steps taken to differentiate the curriculum and pedagogy in order to meet the pupil's needs. A questionnaire was used to gain the views of school staff. In addition I conducted a full day's observation to explore the level of social and curricular inclusion and participation and responses of other students toward this pupil. Both methods allowed me to identify challenges in meeting the pupil's needs along with examples of good practice. Coherent provision to support Emma's development was not evident, although there was

evidence of good practice and attempts to differentiate resources to allow Emma to participate in the lessons. These findings resonate with a number of previous studies.

1.3.ii PPR2: This paper considers the research into the application of psychological problem-solving frameworks in Educational Psychologist's practice, their usefulness and challenges. This paper is an example of how COMORIA was implemented, drawing upon the relevant theory that informed each of the key decision points.

This paper describes how I used a psychological problem solving framework when working collaboratively with school staff to assess the needs of a child at risk of exclusion and to inform development of a theoretically-grounded, evidence-based intervention plan. The Constructionist Model of Informed and Reasoned Action (COMORIA) was used to systematically address how I went about applying psychological theory to facilitate a shared understanding of concerns and collaboratively agree methodology and objectives. The paper considers the research into the application of psychological problem-solving frameworks in Educational Psychologists' practice, their usefulness and challenges. COMORIA proved to be an effective model for creatively applying psychological theory in a systematic and collaborative manner to support a school in seeking a solution to support a child displaying challenging behaviour.

1.3.iii PPR3: This paper presents a review of social skills training literature to determine if social skills training would form the intervention of choice to support Key Stage One mainstream primary school children who were reportedly expressing social, emotional and/or behavioural difficulties?

A range of literature was consulted in order to identify what is already known about social skills training (SST), for the purposes of determining whether SST would be an appropriate intervention to support the development of social skills of Key Stage One children expressing social, emotional and/or behavioural difficulties. Emphasis was placed on behavioural-cognitive and ecological-behavioural approaches as they were considered to have a rigorous evidence-base for understanding how children learn, with consideration also given to the interactions between the child, environment and behaviour. Behavioural-cognitive techniques are also reportedly integral to many school behaviour policies and Educational Psychologists' practice.

A critique of empirical research aimed to address the two key questions: i) what are social skills and SST; and ii) what evidence is there for the effectiveness of SST. With reference to the question of whether SST would be an appropriate method of intervention for Key Stage One children, the paper concludes that SST, grounded in behavioural-cognitive and ecological-behavioural theory now finds empirical support as a component of multi-method approaches to addressing social, emotional and/or behavioural difficulties which young children express.

Appropriate assessment is required in order to tailor intervention to individual strengths and difficulties. Assessment should address the child's attributes (e.g. cognitive skills, developmental abilities (including language), and behavioural presentation), the role of others, and aspects of the contexts within which children live and socialise with others. Assessment data should then be used to consider if intervention is required: i) to strengthen the skill set of the individual, and/or ii) to influence the behaviour and expectations of others, and/or iii) to adapt the

environment within which the children are expected to perform in socially skilful ways. SST should support, not replace those aspects of a school's culture and curriculum which support the development of appropriate social skills and social competence.

1.3.iv PPR4: A example of a case study which draws upon the principles of Dynamic Assessment, Feuerstein's theory of Structural Cognitive Modification and the principles of mediated learning to inform assessment and intervention.

Currently Educational Psychology practice reflects wide variation in assessment methods and styles. Dynamic Assessment is often used as an alternative or to supplement standardised measures of ability (Bosma and Resing 2012). The paper reports upon my work as a Trainee Educational Psychologist working directly with a class teacher, parents and a pupil, drawing upon the principles of Dynamic Assessment, Feuerstein's theory of Structural Cognitive Modifiability and the principles of mediated learning, to inform assessment and intervention. The Cognitive Abilities Profile (Deutsch and Mohammed 2010) was used as a method for structuring a classroom observation and a consultation with the class teacher.

The paper adds to the existing knowledge of dynamic assessment to inform intervention and classroom pedagogy. The paper demonstrates that Dynamic Assessment was a good investment of a trainee educational psychologist's and school time as it provided an opportunity for the educational psychologist, teacher, parents and the pupil to examine the process of learning and identify realistic and appropriate next steps.

1.4 Reflections

Through completing these four comprehensive small-scale studies and by undertaking a more substantive research project, included in Volume One of this thesis, I have gained experience of applying a wide range of methodologies, data collection methods and data analysis. I have had the opportunity to work at a number of different levels typically associated with EP practice (e.g. individual, group, organisation), using a range of approaches, including; assessment, intervention, consultation, training, research and collaborative multi-agency working.

Since much of the work I have undertaken as a TEP has been complex, I have used a range of psychological problem-solving frameworks to guide and structure my information gathering, decision making and formulation of the problem with reference to psychological research.

The research that I have carried out throughout my training has been instrumental in the development my personal professional practice skills and research skills. The experiences and skills that I have developed have also been beneficial to individuals (children and adults), whole-classes and whole-school development. These benefits and my contrition to existing research will be addressed in each of my PPRs which form the remainder of this chapter.

CHAPTER TWO

PPR1: ***A small-scale project to explore school staff's perceptions of effective factors and challenges in mainstream provision for a pupil with complex educational needs.***

Abstract

This study aims to explore school staff's perceptions of effective factors and challenges surrounding provision for 'Emma', a Year 9 pupil with complex special educational needs (SEN), and to consider the steps taken to differentiate the curriculum and pedagogy in order to meet the pupil's needs. A questionnaire was used to gain the views of school staff. In addition I conducted a full day's observation to explore the level of social and curricular inclusion and participation and responses of other students toward this pupil. Both methods allowed me to identify challenges in meeting the pupil's needs along with examples of good practice. Coherent provision to support Emma's development was not evident, although there was evidence of good practice and attempts to differentiate resources to allow Emma to participate in the lessons. These findings resonate with a number of previous studies.

2.1 Introduction

This paper describes how in my role as a Trainee Educational Psychologist (TEP), I endeavoured to support a mainstream secondary school to explore school staff's perceptions of effective practices and challenges surrounding provision for a Year 9 pupil with complex special educational needs (SEN). This study arose following the school's request for support from the Educational Psychology Service because staff were concerned about the school's capability to meet this pupil's needs. This research contributed to a transition review, in line with the SEN Code of Practice (DfES, 2001b).

The pupil is a girl called Emma [3], who has the chromosomal condition Down's Syndrome[4] (DS), and who reportedly presents with significant cognitive and learning delay, particularly with speech and language and behaviour and social development. According to school reports and the Educational Psychology Service (EPS) records, Emma's learning and developmental needs had been well accommodated in mainstream school from Reception to Year 8; however, since the beginning of Year 9, school staff and Emma's parents reported a deterioration in progress with both learning and behaviour. This raised the need to review the current provision specified in her Statement of Special Educational Needs. Throughout Emma's education, records clearly attested to her parents maintaining a sustained commitment to mainstream placement.

The aim of this study was to gain an independent view of Emma through observing a sample of her lessons. These observations were triangulated with the views of school staff who teach and support Emma, to identify challenges in meeting her needs and derive credible examples of effective and adaptive support strategies.

2.2 Case overview

This section aims to provide an overview of Emma's difficulties, the current objectives of her Statement of need under Section 323 of the Education Act 2006, and its specification of how to meet her needs. Her progress over time is also summarised.

[3] Emma is a pseudonym

[4] This paper refers to Down's Syndrome to reflect the terminology used by the Down's Syndrome Association, and to acknowledge John Langdon Down, who authored the first research on Down's Syndrome in 1866 (Down's Syndrome Association, 2009), it is however, still acceptable to refer to Down Syndrome.

Emma's Statement of SEN (2009) sets out to make provision to accommodate significant difficulties in the following areas:

- speech, language and communication skills;
- learning and cognitive skills;
- emotional, social and behaviour skills; and
- personal and independence skills.

A number of recommendations (26 in total) were identified on Emma's statement. Table 2.1 illustrates the objectives of Emma's statement and summarises how the recommendations were to be delivered (classroom based, 1:1 teaching assistant support or specialist support from other LA services, e.g. the Speech and Language Service) according to each objective on the statement. Emma's Educational Psychologist Service file has been used as the primary source of evidence informing this summary.

Educational history

A Statement of SEN was first produced in April 2001 to address the areas of need summarised above, which were viewed as having a biogenetic basis arising from Emma's Down's Syndrome. As Emma proceeded through lower primary school, a request from her maintained mainstream school was made for additional supported hours. Her statement was amended in Year 6 to reflect her changing needs.

Prior to her transfer to secondary school, a reassessment was conducted in February 2009 (Year 6) to assist in identifying an appropriate secondary school placement and the special provision that would be required in order to accommodate Emma's needs within this setting. A mainstream secondary school was named on the statement.

Table 2.1: Objectives and recommendations identified in Emma's current statement of educational need.

Objectives of statement	Recommendations		
	WS/C	**1:1**	**SS**
1. Access a broad and highly differentiated curriculum adapted to meet her needs	✓	✓	✓
2. Develop literacy and numeracy skills	✓	✓	✓
3. Improve language and communication*	✓	✓	✓
4. Continue to develop emotional, social and behavioural skills	✓	✓	
5. Improve personal independence, including sense of personal safety	✓	✓	✓
6. Access an assisted and supported transition to secondary school	✓		✓
7. Develop learning and cognitive skills	✓	✓	✓
8. Develop and maintain her play and social interaction in a range of settings within the school	✓	✓	
9. Enhance self-esteem	✓	✓	
10. Establish and maintain home/school liaison	✓		

**** indicates where training for school staff was recommended***

Key
WS & C - Whole school approach and Classroom-based support
1:1 – Teaching Assistant support
SS - Specialist support

The statement summarised that during her primary school education, Emma had made small steps of progress in all areas of her development. She had individual adult support throughout the whole school day and work was highly differentiated and taught on an individual basis.

Prior to my own involvement, Emma's statement has been maintained and unchanged since 2009. Annual Review reports from 2002 onwards indicate that both her primary and secondary school staff considered they could meet the needs outlined in her statement.

A number of detailed planning meetings were held between Emma's primary school and secondary school with attendance from other support services. The aims of the meetings were to ensure a smooth transition and provide specialist training to secondary school staff. During these meetings an alternative curriculum was

discussed and strategies and resources shared to support Emma's progress and inclusion in the mainstream secondary provision.

2.2.1 Current provision: Emma's mainstream secondary school

The school's prospectus and most recent Office for Standards in Education, Children's Services and Skills (OFSTED, 2011) report is the primary source informing this summary.

Heathton Community College[5] is situated within the West Midlands. The school is a mixed comprehensive community college, with a total of 1159 pupils. The pupils are from a mixed urban and rural community. 13% of pupils have SEN or a disability, 2.5% have a statement of educational need. 4% of the pupils come from an ethnic minority background. This is compared to the national average of 20% of children having SEN (DfE, 2011b).

The information provided in the school's prospectus, prides itself on achievement, teaching and learning based on mutual respect and leadership across the curriculum. It describes an ethos of working together to develop both the academic and broader curriculum to encourage confidence and enthusiasm of students and to prepare them for lifelong learning.

The underpinning espoused principles espoused in the school's Special Education and Inclusion policy are:

[5] Heathton Community College is a pseudonym

- all students, no matter what their difficulties, have the right to choose mainstream education;
- any student, whatever their overall attainment level, may experience a need for support at some stage in their school life;
- special help and support should be available to all students when necessary;
- all teachers are teachers of special needs and provide subject content that is suitable for the needs of all students irrespective of gender, ethnicity and ability; and
- support should be available to staff in meeting this responsibility.

According to the Heathton Community College prospectus, in order to meet these objectives, the SEN department aims to work with and support students with SEN, in lessons or through withdrawal. All school staff are informed of students with SEN through the SEN Register and by the SENCo liaising with subject teachers to advise on approaches to ensure that students achieve their potential. The department has strong links with Local Authority agencies such as Child and Adolescent Mental Health Services, Autism Outreach Team, Special Needs Support Service including Behaviour Support, the Hearing Impaired Service, the Visually Impaired Service and the EPS.

Heathton Community College's most recent OFSTED report (2009) identified that children with a statement of SEN do particularly well, whilst those pupils at 'school action' plus make slower progress. OFSTED observed that *"they (pupils with a statement) all have a teaching assistant who knows when to support them and when to get on by themselves".*

2.3 Special Educational Needs, Inclusion and Pedagogy

Special education in England and Wales has been subject to rapid change and ongoing debate over the past 30 years. In the wake of the 1981 Education Act, children with SEN were to be educated in mainstream schools, whenever this was compatible with their own needs and other pupils needs being met. Since this movement, the term inclusion rather than integration has been promoted (Norwich, 2008). In addition, the 2001 Code of Practice (DfES, 2001) again, confirmed that the SEN of children should normally be met in a mainstream school.

It is argued however, that policy development has outpaced practice, in that inclusion has often 'stalled' because educational institutions do not have the capabilities to include all children due to lack of knowledge, will, vision, resources and morality (Hodkinson, 2010).

Rieser (2012) suggests that the social exclusion of which children with SEN are at risk is not the result of their own disability, but rather of environmental barriers, (often referred to as the 'social model of disability'). According to the social model of educational difficulties and disabilities:

> *Barriers to learning and participation can exist in the nature of the setting or arise through an interaction between pupils and their contexts: the people, policies, institutions, cultures and social and economic circumstances that affect their lives*
>
> *(Booth and Ainscow, 2002, p6).*

Booth and Ainscow (2002) reason that there is much schools can do to reduce institutional barriers, suggesting the development of shared, inclusive values and collaborative relationships can bring about changes in policy and practice, which, can be sustained by new staff and pupils:

> *It is the change in people's and organisational attitudes, thinking and behaviours that will create the paradigm shift necessary to facilitate inclusive education*
>
> (Inclusive Solutions 2011, p15).

It would therefore seem that if schools are to be inclusive, it is crucial that they are able to develop an ethos, pedagogy and curriculum that enable pupils to be supported and also provides for the needs of the teacher (Hodkinson, 2010). These values should be shared by school staff, pupils, parents and governors, with school development becoming a continuous process (Booth and Ainscow, 2002).

Existing literature regarding staff skills and capabilities to make inclusive provision for students with complex SEN within mainstream schools, such as the examples summarised above, emphasises the importance of pedagogic strategies and curriculum.

2.3.1 Pedagogic strategies

Education traditionally has been concerned with conveying information and facts, and has been less concerned with the learning process. The current education system requires learners to understand the state of their knowledge, be able to build upon it,

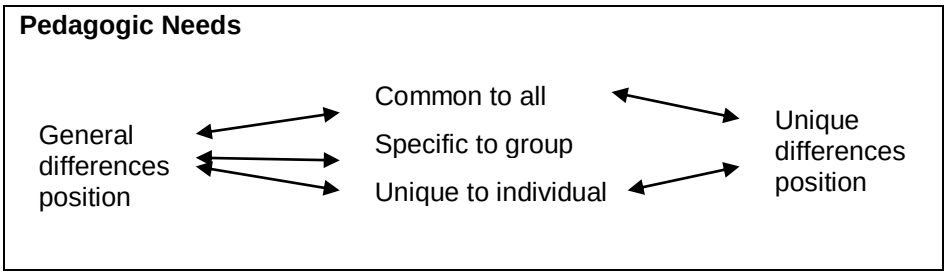
improve it, and apply it appropriately (Kort and Reilly, 2002). Given this shift in the aims and delivery of education, teachers and practitioners need to recognise the affective and cognitive state of all pupils and respond in an appropriate manner (e.g., adjusting the pace, direction, complexity) of teaching and learning (Kort and Reilly, 2002).

Currently there is much focus on making changes at school-level, in parallel to teacher-level change; therefore if inclusion is about increasing the participation of all children in mainstream schools, it must go beyond the general question of the presence of children with SEN in such schools, and:

> *…address the questions of classroom teaching and curriculum*
>
> *in considering inclusion and inclusive practices*
>
> *(Norwich and Lewis 2005, p2).*

Given that current education focuses on providing information to the group as a whole (Kort and Reilly, 2002), which includes pupils with diverse educational needs, Norwich and Lewis (2005) propose a conceptual framework which focuses on the commonality-differentiation continuum of pedagogy. They identify three broad kinds of pedagogic needs: i) the pedagogic needs common to *all* children, ii) the pedagogic needs of a *specific group* and iii) the pedagogic needs of an *individual*. Lewis and Norwich (2005) suggest that there are two contrasting positions: the general differences and the individual differences perspectives which inform pedagogic decisions and strategies (Figure 2.1).

Figure 2.1: Pedagogic positions: the general versus the unique difference positions



(Lewis and Norwich, 2005, p3)

In the *general differences* position, pedagogy is informed by needs that are specific or distinct to a group that shares common characteristics (Figure 2.1). Whilst there continues to be much debate (Warnock, 2005) on the categorisation of learners, Lewis and Norwich (2005), are aiming to highlight:

> *the possibility that categorisation of learners may be pedagogically helpful (…) the general differences position could be held within a more or less pro-inclusion stance. (p4)*

In the *unique differences* position, pedagogic decisions are informed by a combination of the common and the individual needs, not by a specific group's needs (Figure 1). Unique differences are in the foreground, with common pedagogical needs in the background. Lewis and Norwich (2005) argue that specific needs are not recognised; rather it is assumed that all learners share many similarities, alongside their differences. Therefore this position is relevant to all learners regardless of their social background, ethnicity, gender, disability etc. Common pedagogic needs have to be considered in a way that is flexible enough to enable wide individual variation.

Therefore, if inclusion is to move beyond just the location of children with SEN in mainstream classrooms, questions regarding classroom teaching and curriculum need to be addressed (Norwich and Lewis, 2005). Lewis and Norwich (2005) suggest that 'continua of teaching approaches' have significant implications for fostering inclusive practice:

> *This notion helps to distinguish between 'normal' adaptations in class teaching for most pupils and the greater degree of adaptations required for those with more significant learning difficulties. (p.5)*

In an extensive review and critique of literature by Norwich and Lewis (2005) into teaching approaches used with pupils with different forms of learning difficulties, they conclude that little evidence has been found to support the position of generic teaching approaches, which assume that what works with most pupils, will work for all pupils. Similarly, they suggest that some papers written by specialists in SEN make proposals for effective teaching approaches for children with SEN which are unsubstantiated by empirical evidence.

Current international research on effective pedagogies has focused on how education can work to enhance learning processes and outcomes for all pupils across the full range of developmental measures: personal, emotional, social, moral, spiritual and intellectual (Lovat, 2011). Habermas (1987) also maintains the view that education is best understood as a process promoting holistic learning, implying that matters of communicative competence, empathic character and self-reflection are at least as significant to learning as the indisputably important technical skills normally

associated with learning. Osterman (2010) suggests there is an integral connection between teacher relationship and support and the nature of the pedagogy provided by that teacher, resulting in all pupils feeling they belong and therefore experience strengthened emotional wellbeing.

Rix et al (2006) undertook a three-year project focusing upon effective pedagogic approaches in use in mainstream classrooms with children with special educational needs. In conducting an extensive systematic review they identified that teachers who see themselves, rather than TA as responsible for the learning of all the pupils in their class, were the ones who promoted higher order interactions and engaged in more prolonged interactions with pupils with SEN. They recognised that approaches which use successful academic and social outcomes are achieved by pedagogic questions and statements that involve higher order thinking, reasoning, and personal perspective.

Whilst there is no single way to guarantee effective inclusion, Fox et al (2004) identify that a key factor in promoting an effective environment and teaching children with complex learning needs is in the deployment of the TA. Like Rix et al (2006), they suggest the teacher taking a central role in managing the support and organisation of the child's daily education. This approach prevents the pupil becoming reliant on 1:1 support, allows the teacher to focus on teaching and the TA to focus on more general support. As a result, the pupil is able to participate fully in the lesson. Secondly Fox et al (2004) argue, that inclusion is influenced by the way in which the TA works with the class teacher; therefore there should be regular planning meetings to identify the focus of support which promotes the pupil with complex learning needs being an

integral part of class. Fox et al (2004) propose that these measures should be monitored by the head teacher.

Rix et al (2006) conclude that for effective pedagogy for pupils with SEN:

> *Teachers need to recognise that all pupils are their direct responsibility. Teachers need to draw out pupils' understandings, encouraging further questioning and links between new and prior knowledge. (They suggest that learning is) more likely to be effective if it is situated within activities that are hands-on, personally relevant and offer a range of opportunities to engage with the concepts, and with others' understandings of those concepts. (p.1)*

2.3.2 Curriculum

Given the number of pupils identified as having moderate learning difficulties (MLD), there is relatively little research into curriculum and teaching for this specific group (Norwich and Kelly, 2005). More recently, the DfE (2011a) has launched a review of the National Curriculum in England with the aim of developing a coherent curriculum which allows children to build their knowledge systematically and consistently. The curriculum should provide relevant and challenging learning to all children. It should follow the three principles set out in the inclusion statement:

- setting suitable learning challenges;
- responding to pupils' diverse learning needs; and

- overcoming potential barriers to learning and assessment for individuals and groups of pupils.

Within this review the DfE (2011a) has produced guidelines 'Including all Learners' which identify the diverse needs to pupils in the current education system, recommending:

> *For pupils whose attainments fall significantly below the expected levels at a particular stage, a much greater degree of differentiation will be necessary. In these circumstances, teachers may need to use the content of programmes of study as a resource or to provide a context, in planning learning appropriate to the requirements of their pupils. (p.2)*

These guidelines build upon existing inclusion principles, whilst endorsing greater flexibility to plan a curriculum that best meets the needs of all learners. Within the above guidelines are resource materials to support the National Curriculum framework. The National Curriculum provides the principle of a common curriculum for all, but does not address the extent to which all pupils should have the same schooling and opportunities, whilst adapting it to meet diverse needs.

The developments in government guidelines and recent research suggest that there remains little attempt to develop a curriculum or pedagogy specifically for pupils with complex learning difficulties: an approach perhaps consist with Lewis and Norwich's (2005) 'unique differences' perspectives.

2.4 The current study: Inclusive provision for a pupil with complex SEN

As professionals play a key role in effective inclusive education, the aim of this study was to gain the views of school staff who teach and support Emma, to identify challenges in meeting her needs and derive examples of effective and adaptive strategies that were in use and/or which appeared viable.

Research questions for this study included:

1. Are there common challenges expressed by staff or do perspectives differ according to the role of the member of staff (Teacher or Teaching Assistant/subject domain)
2. Does the (teaching) experience of the member of staff influence their views of inclusion and its challenges and effective factors?
3. How do the perceptions of schools staff align with my own observations? What areas of consensus, difference and contradictions are apparent?

2.4.1 Design

This study was a single case study design, of one case in its context. I utilised a multi-methods approach, seeking to elicit qualitative and quantitative data (using a questionnaire and observations) to gain school staff's perspective and compare these with my own observations of Emma's presentation and responses to teachers' classroom organisation and pedagogy.

Time Scale & Procedures

This study was conducted over a six week period. A timeline for this study is illustrated in Table 2.2.

2.4.2 Methodology

A multi-method approach was employed to provide an in-depth understanding of the context, culture, views and experiences of key stakeholders within the school setting.

2.4.3i Epistemology

As a researcher I adopted a constructivist epistemological stance. Constructivists maintain that reality does exist, but in the form of multiple constructions of meaning and knowledge. I subscribed to the view that reality can only be mediated subjectively and that knowledge is acquired through individual experience and interpretation (Robson, 2011), I was concerned to utilise methods which would provide a way of understanding different respondents' constructs of Emma's needs within the school context. This approach to understanding realities is less concerned with making generalisations, and is primarily concerned to uncover each individual's unique perspective in a social context.

Table 2.2: Time Scales of the investigation

	Stage of study
Week 1	School request EP involvement Meeting with the SENCo to identify need and scope of the investigation The SENCo agreed to act as lead contact within the school Agreed focus for the study Agree methods for data collection
Week 2	Designing and piloting of the questionnaire with questions and categories on the questionnaire were identified from Emma's current statement of educational need The questionnaire was piloted with colleagues in the EPS and University to ensure clarity of wording of questions
Week 3 & 4	Questionnaires were emailed to the SENCo, who forwarded a copy to relevant school staff. Instructions for completion were attached to each questionnaire Questionnaire sent to all school staff who teach or support Emma
Week 5	Completed questionnaires returned by staff to the SENCo Paper copies of all the returned questionnaires were collected in person.
Week 6	Full day observation carried out The TA had been made aware of my visit by the SENCo. I was able to shadow the TA all day the TA took responsibility for showing me around the school and taking me to lessons

In an attempt to incorporate characteristics of traditional positivist methods, whilst also incorporating the perspectives of the participants, two complementary methods of data collection were employed. Table 2.3 illustrates the data collection methods with comment regarding the strengths and limitations of each.

2.4.3.ii Questionnaire

The construction of the questionnaire and the type of information to be obtained required careful consideration. The categories regarding specific information about participants (e.g. role within the school and the length of time they had been working with Emma) were defined with the Special Educational Needs Coordinator (SENCo) at the planning stage (week 1).

It was important that individuals were confident that confidentiality would be safeguarded to reduce risks of their responding inaccurately in order to preserve their reputation. To overcome this potential bias, participants were presented with a band option (Senior Management, Teacher, Support Staff), rather than being asked to identify their specific role within the school, although this was at the expensive of losing contextual information.

Table 2.3 – Data Collection Methods

	Strengths	Limitations
Questionnaire	• Time and cost effective • Larger sample size • The reliability was strengthened as all the respondents were presented with the same standardised questions • A large amount of data was able to be generated	• Biases in accuracy (memory and socially desirable responses) • Non-completion reduces the representativeness of sample • Some participants did not complete all the questions due to time limitations
Observations	• All subjects (teachers, TA and Emma) were aware of the observation and its purpose • Principles of the overt observation are aligned with ethical considerations (Table 4) • Can generate meaningful hypotheses (Cohen et al 2008)	• Selective attention to the observed subjects (teachers, TAs and Emma) potentially confounded by the researcher's own interests and experiences • Behaviour of subjects may be skewed as a result of their awareness of the observation, 'demand characteristics' • Impaired recall of the observation findings due the notes being written up after rather than during the observation (Cohen at al, 2008)

A wide range of techniques can be used to elicit participants' attitudes. The rationale for using questionnaires was informed by weighing the potential strengths and limitations summarised in Table 2.3. To facilitate speed of completion of the questionnaire, a Likert scale was selected for responses. Participants were presented with an area of development and asked to report i) how they thought the Emma was coping in the area and ii) how effective they believed their current strategies were in supporting Emma. Given the subjectivity underlying each participant's rating, each question was followed up with an open-ended question, allowing the participants to expand on their answer, should they so wish.

Information was provided to all participant regarding the aims and purposes of the questionnaire. Instructions for completion were also provided (see Appendix 1 for the full questionnaire). Notwithstanding the above caveats (Table 2.3) regarding the limitations of questionnaires, one of the fundamental attractions of the questionnaire method is its transparency. To supplement the questionnaire, an unstructured observation, which included informal discussions with staff, provided an opportunity to elicit greater depth and detail (Gillham 2008), and to make some comparisons between what was reported and observed in realities and practices.

2.4.3.iii Observations

Observation was used to gain insight into Emma's general presentation, both in the classroom and other school settings. My aim was to explore the level of social and curricular inclusion and participation and the responses of other students toward her. I also intended to gain a greater understanding of the pedagogic approaches adopted to meet Emma's needs. My aim was to consider the curriculum and pedagogy and steps taken to differentiate in order to meet Emma's needs. I had initially considered using a structured observation schedule. However, once in the situation, I judged it more appropriate and valuable to adopt a participant observation method (Wragg, 1994). This type of observation allowed me to join in the classroom activities and talk to other people (staff and students) in this microsystem, allowing me to generate and check out emergent hypotheses. My position as a researcher was transparent and carefully explained. An unstructured observation was useful to generate hypotheses, it also had its disadvantages, such as the findings generated are potentially biased, impressionistic and idiosyncratic (Bell, 2005).

2.4.3.iv Ethical Consideration

For the two data collection methods employed, ethical tensions may have arisen due to the sensitive nature of the inquiry, the procedures adopted, and how the data were then communicated and acted upon. As a research student, I adhered to the British Psychology Society (BPS 2011) guidelines on the ethics of psychological research and British Educational Research Association (BERA) (2011) guidelines. As a trainee in a professional capacity, I also worked within the British Psychology Society Code of Ethics and Conduct (2009) and the Health Professionals Standards: Standards of Conduct, Performance and Ethics for Students (2009), all of which set out to uphold the highest standards of professionalism, and to promote ethical behaviour, attitudes and judgements on the part of psychologists. The four most relevant considerations (BPS 2009) which informed the design and implementation of the study are illustrated in Table 2.4. Due to the current tensions between parents and the school, it was not deemed appropriate to include parental views or Emma's views in this study. These views will be gathered and incorporated into the transition planning at a later stage.

Table 2.4: Key Ethical Considerations

Ethical Consideration	How Considerations were Addressed
Consent	In order to gain informed consent, at the outset of each phase of the data gathering, I informed all participants of the objectives of the research. I emphasised the voluntary nature of participation in research, and made participants aware that they had the right to withdraw, without offering any explanation at any stage.
Access to data	Confidential information and records were stored in a secure office for up to 10 years.
Confidentiality	Subject to the requirements of legislation, such as the Data Protection Act (1998), information obtained about a participant during an investigation is confidential unless otherwise agreed in advance. The participants in this research were informed that information they provided would be treated confidentially and, if published in a report, would not be identifiable as their views.
Respect	Respect for the participants' knowledge, insight, experience and expertise was upheld at all times.

(BPS, 2009)

2.5 Analysis of results

From the questionnaire and observations, findings are organised by the research questions. Due to the large volume of data generated from the questionnaires, findings have been categorised by the objectives identified in Emma's statement of educational need. Findings from the observations have been categorised according the two key themes that were identified in the literature review (the raw data can be found in Appendix 2):

- pedagogic strategies; and
- curriculum.

2.5.1 Questionnaire

Questionnaires had been sent to all school staff who teach or support Emma. Also included was the SENCo and the deputy head teacher (N=19) A total of 11 participants (58%) responded to the questionnaire, seven teachers and four TAs. Tables 2.5 and 2.6 provide a summary of the findings from the questionnaire.

1. Common challenges expressed by staff and perspectives according to the role of the member of staff (Teacher or Teaching Assistant).

A number of common challenges were identified by both teachers and TAs (engaging Emma and managing the effects of Emma's poor memory and cognitive skills); however, such similarities were not found regarding Emma's perceived strengths.

There was a marked difference between the strengths identified by the TAs and the teachers.

Emma's engagement in lessons was seen as a strength by the teachers; however none of the TAs identified this as a strength. The TAs reported independence skills (such as finding her way around the school) and social skills as being Emma's areas of strength, whereas none of the teachers identified these. Teachers identified behaviours for learning (such as motivation and engagement) as priority areas of difficulty for Emma, whereas the TAs, who are providing a more focused and directive supportive role, held different priorities, such as independence.

Table 2.5: School staff perceptions of Emma's key strengths and challenges

	No of responses		
Strengths (Q.1)	**Total**	**T**	**TA**
Engagement	11	11	0
Independency skills	5	0	5
Social relationships	3	0	3
Managing emotions and behaviours	2	2	0
Memory and Cognition	2	2	0
Language & Communication	0	0	0
Difficulties & Challenges (Q.2)			
Engagement	14	6	8
Memory and Cognition	5	4	1
Language & Communication	5	2	3
Managing emotions and behaviours	3	0	3
Social relationships	3	3	0
Independence skills	0	0	0

T- Teacher (N=7), TA – Teaching Assistant (N=4)

This difference in perspective of teachers and TAs is further evident in perceptions of Emma's behaviour; all but one of the TAs noted that Emma's behaviour can be challenging, while, none of the teachers indicated this as a challenge. This finding will be explored further in the analysis of the observation findings.

There were consistencies between the areas of difficulty identified by school staff and those identified in Emma's statement of need in 2009; for example, memory and cognition, and language and communication were identified as areas of difficulty in both areas.

It is also worth noting that two of the teachers did not identify any strengths; therefore the strengths identified have been reported by only five of the teachers. I was unable to make comparisons between subjects as all participants elected to keep their subject domain anonymous.

Table 2.6: Schools staff perceptions of how well Emma copes in their lessons and how effective they feel their current strategies are for supporting specific areas of development

Areas of Development (Q.4)			
Emma is able to cope		**Effectiveness of current strategies**	
Most able to cope	Managing emotions and behaviours	Most effective	Engagement
	Memory and cognition		Independence skills
↓	Social relationships	↓	Managing emotions and behaviours
	Engagement		Social relationships
	Independence skills		Memory and Cognition
Least able to cope	Language & communication	Least effective	Language & Communication

2. Does the teaching experience of the member of staff influence their views of inclusion, its challenges and effective factors?

Two participants had over 11 years teaching experience, and both of these made reference to a special school or split placement being a more appropriate means of provision for Emma, rather than a full time mainstream placement.

The majority of participants (56%) had between 1-5 years experience of working in schools (either teaching or supporting). There was a difference in the language the

more experienced staff used to describe challenges and desired outcomes: the more recently trained practitioners reported wanting more effective methods and activities to help Emma develop specific skills. Their responses indicated they were seeking solutions within the current placement, with one participant making reference to developing a '*meaningful curriculum'* for Emma. Only one participant in this category made reference to an alternative placement.

There were no differences in responses from those staff who had worked with Emma for two years compared to those who had only worked with her since the start of the current academic year, suggesting that the level of experience and existing knowledge of Emma did not impact upon perceptions of her strengths or challenges presented: an interesting finding in light of the referral information that Emma had coped well in Year 8, in contrast to the difficulties manifest in Year 9.

2.5.2 Observations

Findings have been categorised by the pedagogic strategies identified by Norwich and Lewis (2005) (Table 2.7). Further observation findings are discussed with attention given to pedagogic approaches, the curriculum and the classroom ethos.

3. How do the perceptions of schools staff align with my observations? What areas of consensus, difference and contradictions are apparent?

Pedagogic approaches and the curriculum

It is recommended in both Emma's current statement of educational need and in recent government guidelines that the objectives of tasks should be broken down into

small, discrete steps with a variety of examples provided to support learning (Norwich and Lewis, 2005). During the observations, tasks were presented in one format and new skills were taught in isolation from that task. Other examples were not drawn upon to facilitate fluency-building, maintenance or generalisation of skills (Haring and Eaton, 1978).

I observed both teachers and TAs providing Emma with frequent praise and encouragement in all lessons and during break and lunchtimes; however the feedback was not related directly to tasks and did not focus on specific skills Emma demonstrated. In my judgement, strategic extrinsic praise was used as a method of behaviour management rather than as feedback within a mediational approach to develop Emma's skills and meta-cognition, such as communicative competence, empathic awareness or self-reflection (Habermas, 1987).

Recommendations from the statement were implemented but, again, in isolated lessons, Appendix 3 provides further detail of the frequency and context in which these were observed. Whilst recommendations were met on a number of occasions, observation suggested these were isolated instances accounting for a very small proportion of the school day.

Whilst steps were taken to make lesson content actively accessible to Emma, she presented herself as a passive participant in her learning. School staff were *aware* of her needs, but objectives and materials were rarely differentiated accordingly, with little evidence that a 'flexible curriculum' was being taken advantage of a 'continuum of teaching approaches' (Norwich and Lewis, 2005) was not observed; rather

pedagogic strategies were employed at a whole group level, with exceptional/different activities arranged for Emma.

Class ethos

i) Attitudes of school staff

I observed clear and distinct roles; teachers took the lead in setting the work and delivering the work to the class as a whole, whereas the TA's role was to provide direct 1:1 support to Emma. I judged that the TA's interactions with Emma, when compared to the teacher's interactions, were more concerned with ensuring task completion rather than promoting Emma's learning and understanding.

The TAs had formed a home-school liaison diary to exchange relevant information on a daily basis. Developing a partnership with parents to support the pupil was a recommendation by the DfE (2011a); it was therefore encouraging to observe this communication in practice. However there was little comment on the content of the curriculum; the diary was used primarily to provide consistent support for Emma's emotional wellbeing.

From my observations, I concluded that the teacher and TA worked independently of each other: no time was allocated for joint planning or feedback on progress. Due to this lack of communication, the more effective strategies were not shared when Emma moved between classes (Fox et al, 2004) and learning was not planned in context, appropriate to the requirements of the curriculum and/or taking account of Emma's needs (DfE, 2011a).

The teaching staff and TA to whom I spoke in the course of the day's observations, reported that they had not received any additional or specific training which prepared them to meet the needs of Emma and/or other pupils with complex learning difficulties. This finding is consistent with reports that training for the teaching of pupils with complex needs continues to be inadequate according to Hodkinson (2010) and Norwich and Nash (2011).

ii) Social inclusion

Osterman (2010) suggests there is an integral connection between teacher-pupil relationships and support, and the nature of the pedagogy provided by that teacher, resulting in, at best, all pupils feeling they belong and therefore experiencing strengthened emotional wellbeing.

Whilst Emma appeared very peripherally engaged in relationships with her teachers or other pupils in the social aspect of school life, I did not observe any hostility or inappropriate behaviour from other pupils towards her. Emma did not actively seek engagement with other pupils; during her free time she chose to be on her own, there were opportunities to be included with other pupils with similar interests, however this was not facilitated or supported by an adult. Some of the barriers to Emma's learning and participation supported by my observations, existed through the interactions between the other pupils, school staff, institutional culture and the social circumstances, in which she finds herself in (e.g. the language used or the nature of discussions was often inaccessible to Emma, due to her cognitive functioning, maturity and levels of expressive language).

Through my own observations and in discussions with school staff, I judged that the learning context, seemed to be concerned mainly with performance and outcomes for pupils, typical of traditional educational models, rather than with the actual processes of learning, especially for children with SEN. Phrases such as 'We are an academic school...' or 'We have to get pupils ready for their GCSE exams..' were evoked frequently. This is a perception which appears to be held by senior management, teachers and TAs, regardless of their teaching experiences.

There is a clear role for teachers having central responsibility for the learning of all the pupils in their class, promoting higher order interactions and engaging in prolonged interactions with pupils with SEN (Rix et al, 2006). The findings from this study indicate that it is predominantly the TAs who are undertaking this principal role, rather than taking a general supportive role. Consequently Emma is extremely reliant on TAs, is often not participating in the class and is not being encouraged to develop her learning of new and existing skills and/or independent thinking (Fox et al, 2004). Hence, my findings from observations, contradict the views of schools staff who positioned Emma's independence and engagement in lessons as her strengths.

2.6 Conclusion

The expectation for inclusive education which can fully accommodate the complex needs of pupils with significant learning difficulties continues to be one of the most challenging policies to implement, both at a national and a local level (Norwich, 2005). It is therefore not surprising that the school at the centre of this study is experiencing these challenges. The findings from this study are complex, and indeed at times contradictory.

This paper has focused on three main areas of inclusion: theory of pedagogy, the role of the TA and the curriculum. The findings from this study have been concluded under these broad areas:

i. theory of pedagogy

The pedagogic strategies observed and reported in this study were less concerned with the learning processes, but rather, are driven by outcome (e.g. exam results). Feedback from school staff and observations, did not reveal teaching approaches which encouraged Emma to understand her knowledge, build upon it and then apply it appropriately (Kort and Reilly, 2002). As a consequence Emma was merely present in the classroom, with little active learning or teaching occurring.

To overcome some of these challenges and further engage Emma in learning, Norwich and Lewis' (2005) theory of 'commonality – differentiation continuum of pedagogy', would be a useful framework for conceptualising Emma's needs in relation to the rest of her peers, and inform effective teaching strategies, which place Emma's unique differences in the foreground when planning an appropriate curriculum, facilitated by teacher *and* TA input and mediation.

Norwich and Lewis (2005) found little evidence to support the position of generic teaching approaches. Whilst differentiated work was provided for Emma, differentiated teaching approaches were not observed or reported in the questionnaire. Therefore adaptations in teaching approaches are necessary if Emma is to benefit from a mainstream placement, alongside developing the connection

between teacher relationships, support and the pedagogy provided to ensure that Emma is an integral part of school culture (Osterman, 2010).

ii. The role of the TA

Evidence based research indicates that teachers who viewed themselves as responsible for the learning of all pupils, promoted prolonged interactions with pupils with SEN (Rix et al, 2006). This current study illustrated limited direct teacher interaction with Emma, instead it was considered the TA's responsibility to engage and manage Emma.

As a consequence, Emma had become over dependent on the TA and peers, resulting in her having little independence in her learning and leading to 'learnt helplessness' behaviour on her part. To overcome this, changes in role structures need to be addressed which endorse the teacher having the opportunity to gain a greater understanding of Emma's needs and her approaches to learning. This information should then be used to inform joint planning between the teacher and TA (Fox et al, 2004), a process which actively involves and is overseen by the SENCo.

iii. The curriculum

Limited variation in the curriculum available for Emma could be noted. Whilst flexibility in the curriculum is greatly endorsed in the recent DfE (2011a) guidelines: 'Including all Learners', this study highlighted the challenges of balancing a flexible curriculum for one pupil with complex needs, against the needs of the majority of pupils. The school central to this study, categorically reported that alternative curriculums, such as P-Levels was appropriate for their school, and nor, did school

staff have sufficient knowledge and resources to deliver such a differentiated curriculum.

This study has indicated that guidelines produced promote ideologies, rather than providing specific pedagogic strategies as to how best to implement these guidelines and meet the needs of learners with complex needs. I would conclude effective implementation of such guidelines and other inclusion strategies relies heavily on the school's ethos, culture and perceived role. Norwich and Lewis's (2005) 'continuum of pedagogy' is a helpful framework for considering the needs of all learners, due to the 'continua' nature of teaching proposed, in which learners share similarities, alongside differences.

The teaching experience of members of staff in this study did not appear to impact upon their views of Emma or how she should be educated. However, in hindsight, the design of the questionnaire did not provide the opportunity to explore this factor in the intended detail; therefore further exploration is needed to inform any more reliable conclusions.

Whilst there have been a number of areas of consensus and contradictions noted from my own observations and the views held by school staff, I would reason this is a by-product of the organisation and culture of the current school. There is a significant discrepancy between the scale of Emma's needs and those of any of her peers; this raises questions about the capability of the school staff in this academically oriented high attaining school to understand how they can make 'inclusive provision' to accommodate Emma's exceptional needs; a finding which

does not align with a number of the espoused principles of the school's Special Education and Inclusion policy (p.4).

It is possible that the role of the educational psychologist in this instance would be best placed to support the school in developing its existing policies, ensuring that disparities between policy, practice and the capabilities of staff are addressed accordingly.

Relevant literature which has been drawn upon, proposed evidence-based models for effective pedagogical strategies through which a curriculum can be delivered. Norwich and Lewis' (2005) conceptual framework which focuses on the commonality-differentiation of pedagogy would appear to afford an effective framework for understanding inclusive pedagogical approaches to address the needs of all pupils, not just those, such as Emma, with complex learning difficulties.

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Appendices

Appendix 1 – Questionnaire to school staff

Appendix 2 – Findings from the questionnaires and observations

Appendix 1 – Questionnaire to school staff

Young Person Information – Emma ******: Staff Questionnaire

My name is Sarah Williams and I am a Trainee Educational Psychologist from the University of Birmingham, working in the Educational Psychology Service in **********.

The Educational Psychology Service has been asked by Heathton Community College to be involved in a project which aims to gather information about Emma and explore effective strategies and ways of working with Emma.

This project aims to be of benefit to staff who work with Emma, and to Emma herself, but with a wider objective of supporting the development of strategies, skills and resources within Rawlett which can support effective practice with other students with special educational needs.

I will be gathering information from a range of sources, including:

1. a semi-structured questionnaire to gather the perspectives of all staff who teach and support Emma;
2. observing Emma throughout a day (Friday 25th November) to inform my own understanding of her presentation in a range of school contexts, and, in particular, her approach to learning and participation in lessons; and
3. a focus group to discuss findings from the questionnaire and observations to check their reliability and explore the viability of a number of suggested strategies which appear to fit well with the strengths, difficulties and needs identified through the two preceding methods, and to be feasible within a mainstream school setting such as Heathton.

This questionnaire should take about **10 minutes to complete.** Responses will be used to develop a clear picture of the challenges which Emma and staff experience, the strategies currently in place to support her participation and learning, and priorities for future action. If you wish to expand upon your comments, please continue on the back of page three. The return date for this questionnaire is the end of the school day on **Friday 25th November 2011**. Please return your completed questionnaire to ****** *****.

The information which you and colleagues provide will be used to inform recommendations and strategies. All respondents are assured confidentiality: no-one will be identified personally when response trends are reported; all names will be removed from questionnaires and observation records.

If you wish to contact me I will be visiting the school for the day on Friday 25th November, or alternatively you can contact me at ********@****** . ********* ****** (Educational Psychologist) is my placement supervisor and can be contacted at **********@******.

I would like to thank you in advance for taking the time to complete this questionnaire, Your views are important in informing future action, and are very much appreciated.

Respondent information

Name (Optional):
Subject Area (Optional):
Date of completion:

Role within the school:
Senior management ☐
Teaching staff ☐
Support staff ☐

Number years' teaching / TA experience:
Less than 1 year ☐
1-5 years ☐
6- 10 years ☐
11 years plus ☐

Number of years at Heathton:
Less than 1 year ☐
1-5 years ☐
6- 10 years ☐
11 years plus ☐

Length of time working with Emma:
Less than 1 year ☐
1-2 years ☐

1. Overall, from your own direct work with Emma, what would you identify as her major strengths:

i)

ii)

iii)

2. What would you identify as her main difficulties or the key challenges she presents in your lessons?

i)

ii)

iii)

3. List three priority outcomes that you hope will be achieved through this project, for your own practice and/or for the school as a whole?

i)

ii)

iii)

4. Please indicate in Column B below how Emma currently copes in your lessons, against each of the dimensions listed in Column A.

1 = major problems; 2 = some problems / inconsistent; 3 = generally OK; 4 = doing quite well overall (albeit inconsistently) ; 5 = doing well

In Column C, note the arrangements you make to support Emma in your lessons

In Column D indicate how effective these 'special provisions' are in your judgement:

1 = very little positive impact; 2 = some / variable impact; 3 = generally successful and effective approach

Thank you very much for completing this questionnaire

A **Areas of Emma's development**	**B** **Coping in lessons (1-5)**	**C** **How I support Emma in my lessons**	**D** **Effectiveness of current support (1-3)**	**E** **Further comments**
Engagement and participation in learning				
Memory and cognitive skills				
Independency skills, e.g. organisation, co-ordination and homework				
Managing emotions and behaviour				
Developing and sustaining social relationships				
Language and communication skills				

Appendix 2 – Findings from the questionnaires and observations

NB: Lessons have not been summarised in the order they occur on the timetable to preserve animosity

Lesson A

- 1:1 in the SEN room (Emma's choice).
- Task related to the subject/topic area and daily routines in Emma's life.
- Skills she practiced were cutting (fine motor), identification of visual stimulus, sequencing.
- Strategies used by the TA included mediation, interpreting task (verbally), modelling how to complete the task and encouragement.
- Emma fully engaged in the task and completed it, she appeared satisfied when she completed it and was pleased that the TA was going to take it back to the teacher.
- Opportunity for relationship building.

Lesson B

- Emma was in the classroom with the whole class for the full lesson.
- The introduction to the lesson was a demonstration by the teacher, the whole class gathered at the front of the class to observe this (Emma was part of this).
- When the class were working independently, Emma's work was broken into two parts:
  i) A computer based task which related to the subject/topic. Skills she practiced included problem solving, identifying shapes, matching activities
  ii) A practical task (the same as the rest of the class), which had been modified by another pupil for her. Skills she practiced included number skills, using a pencil and ruler (fine motor skills), systematic planning.
- Strategies used by the TA included mediation, interpreting task (verbally), modelling how to complete the task and encouragement.
- Another pupil took an interest in what Emma was doing, offering peer support and encouragement.
- Throughout the lesson the class teacher discussed the work with the TA and regularly came over to Emma to check what she was doing, offered suggestions and praise her.

Lesson C

- Emma was in the classroom with the whole class for the full lesson.
- The teacher set the work for the whole class.
- The TA modified and differentiated the task for Emma.
- Strategies used by the TA included mediation, explaining task (verbally), discussion and encouragement. The first task was a written, using subject specific language, the TA scribed for Emma to ensure the work was recorded accurately in her book. The second task was to create a poster. Emma was able to do this independently with prompts and encouragement from the TA.

- During the lesson the teacher regularly observed what Emma was doing.
- Emma completed the task before the end of the lesson, for the remainder of the lesson Emma was looking out the window and interacting appropriately with a group of other pupils.

Lesson D

- 1:1 in a different classroom.
- Free choice activities (reward from previous lesson).The structure of the lesson was determined by Emma.
- Activities allowed Emma to develop her problem solving skills, special awareness skills and writing skills (fine motor skills).
- Opportunity for relationship building and for Emma to be expressive (singing, chatting)

Break/Lunchtime/Between lessons

- Independent and able to communicate needs (toilet).
- Appeared to be happy around other children whilst eating.
- After eating took herself into another room to listen to music on headphones.
- Reluctant to draw an end to lunchtime and return to lessons. Emma said she was poorly so wanted to go home. Emma's reasoning for not wanting to go to lessons was because they were "boring".
- Behaviour and language deteriorated rapidly when Emma was not able to choose what she did.
- Strategies used by TAs and other staff included staying calm, being firm and fair, not reacting to inappropriate language, reasoning with Emma, distraction techniques. These strategies were effective in reaching a compromise that Emma would complete the class work in the SEN room.

CHAPTER THREE

PPR2: This paper considers the research into the application of psychological problem-solving frameworks in Educational Psychologist's practice, their usefulness and challenges. This paper is an example of how COMORIA was implemented, drawing upon the relevant theory that informed each of the key decision points.

Abstract

This paper describes how I used a psychological problem solving framework when working collaboratively with school staff to assess the needs of a child at risk of exclusion and to inform development of a theoretically-grounded, evidence-based intervention plan. The Constructionist Model of Informed and Reasoned Action (COMORIA) was used to systematically address how I went about applying psychological theory to facilitate a shared understanding of concerns and collaboratively agree methodology and objectives. The paper considers the research into the application of psychological problem-solving frameworks in Educational Psychologists' practice, their usefulness and challenges. COMORIA proved to be an effective model for creatively applying psychological theory in a systematic and collaborative manner to support a school in seeking a solution to support a child displaying challenging behaviour.

3.1 Introduction

This paper describes how in my role as a Trainee Educational Psychologist (TEP), I endeavoured to support staff in a mainstream junior school to explore realistic solutions and strategies to manage the behaviour of a Year 5 boy. This casework arose following school staff's request for support from the Educational Psychology Service because they were concerned about the school's capability to meet this pupil's needs.

Jimmy[6] is in Year 5, and reportedly presented with challenging behaviours and showed difficulties managing his anger. According to school reports, Jimmy had

[6] Jimmy is a pseudonym

received a number of fixed term exclusions for aggressive and violent behaviour towards other children. His parents reported that Jimmy's behaviour had continued to be a cause for concern throughout his schooling. However up until Year 5, his needs had been well accommodated in school. Since September there had been a significant increase in the number of violent and aggressive incidents.

At the time of the request for EP support, there was an existing Common Assessment Framework (CAF) in place to coordinate multi-agency support for the whole family. The CAF was initially instigated following a recent bereavement in the family of a young step-child. There were reports from school and parents of a turbulent family history and a challenging home situation. Services involved in supporting the family through the CAF included: school (infants and juniors), social services family support service, a local bereavement service, school nurse, CAMHS and the manager from a local youth support service.

The aim of this paper is briefly to illustrate my role and contribution in providing support to the school and assessing Jimmy's needs to inform a theoretically grounded intervention. The COMORIA was employed as a psychological problem-solving framework to facilitate the application of psychology in a complex and multi-factored context.

3.2 The role of Educational Psychologists

The BPS describes the role of an Educational Psychologist (EP) as:

(to) tackle the problems encountered by young people in education, which may involve learning difficulties and social or emotional problems. They carry out a wide range of tasks with the aim of enhancing children's learning and enabling teachers to become more aware of the social factors affecting teaching and learning

(British Psychology Society 2013).

In addressing this broad remit EPs work at many different levels and contexts within the education system (Fredrickson and Miller 2008, Fallon et al 2010), illustrated in Table 3.1.

Table 3.1: Examples of the levels of work and core activities of Educational Psychologist

Level	Consultation	Assessment	Intervention	Training	Research
Child & Family	Individual discussion Contributions to IEPs Home Visits Review meetings	Assessment in context Identify individual strengths and needs	Individual Group Family therapy	Groups parents	Single case or small group studies
School/ Organisational	Joint working Group consultation Strategic planning	Contribute to assessment of whole school assessment policies and procedures	Whole-school interventions Contribution to developing pedagogy Transition support	Staff training Disseminating evidence-based practice	Collaborative action research
Education Authority/ Council	Contribution to strategic planning	Contribution too statutory assessment Contribution to policy and procedures	Contribution to authority wide interventions and initiatives	Authority wide training in areas related to psychology Contribute to multi-agency training	Authority wide action research Evidence-based practice informing policy and practice

(Adapted from Fredrickson et al, 2008, p.4)

EPs are often referred to as *'applied practitioners' or 'scientific practitioners'* (DECP 2002, Kelly 2008, Dunsmuir et al 2009, Fredrickson and Miller 2008, Fox 2009,

Fallon et al 2010, Wicks 2013, Annan et al 2013), representing an important link between the worlds of academic psychology and education (DECP 2002):

> *This reconciliation envisages EPs making relevant use of scientific principles and method, such as hypothesis testing and validity checking within the context of their practice with individuals and group*
>
> (Fallon et al 2010, p.3).

To this end, EPs often employ a systematic approach to problem solving (Monsen et al 1998), often working at a strategic level (Rhydderch & Gameson 2010), generating hypotheses in an attempt to bridge the gap between the initial problem and goal (Monsen et al 2008):

> *through regular consultation with schools educational psychology services can provide help in clarifying problems and devising problem solving strategies*
>
> (Cameron 2006, p.290).

Table 3.1 provided a broad overview of the number of different levels EPs traditional work, at the core of each level, EPs employ some kind of systematic problem-solving (Cameron 2006, Monsen and Fredrickson 2008, Annan et al 2013). Problem-solving involves a process of clarifying what the concerns are and generating a range of possible solutions within real-life settings, with the aim of overcoming or reducing the concern. This process considers the EP and the client as both being involved in an

'active inquiry-based process' (Monsen and Fredrickson 2008) enabling service users to understand and manage problems without *fostering a dependence on an expert* (Gameson et al 2003).

Monsen and Fredrickson (2008) state that it is:

> the cognitive, interpersonal and technical skills required in gathering information about a client's problem situation and in implementing and evaluating solutions are similar in all branches of applied psychology
>
> (Monsen and Fredrickson 2008, p70).

Problem-analysis involves conceptualising the concern by integrating the dimensions of the problem and understanding the relationship between them (DCEP 2002, Annan et al 2013), From the collated information, hypotheses are generated and tested in order to provide further understanding into the problem dimensions. This process is informed by psychological theory and research evidence, emphasising the connection between *applied psychology* and *evidence-based practice* (Gameson et al 2003).

The following section will explore in more detail how one of the contribution of an EP lies in their systematic questioning to formulate and test hypotheses about the nature of the reported concern, in order to gain a shared understanding of the situation by all concerned. The paper details multi-level working, using a problem-solving

framework to facilitate and support problem analysis and inform intervention in a real-world context.

3.3. Psychological problem-solving frameworks: principles and practicalities

Given the complexity of much of an EP's work, problem-solving frameworks often provide a structure for EPs to clarify and address concerns, and to construct and explore hypotheses with the relevant stakeholders in a collaborative manner (Annan et al 2013). Such frameworks can also help to facilitate discussions about broader teaching and learning needs and strategies, thus further accentuating the range of work that EP can undertake at an individual, whole class and whole school level (Atkinson et al 2006).

The principal aim of this section is to introduce psychological problem-solving frameworks which EPs may draw upon to ensure their practice is systematic when applying psychology in complex situations. The key themes which will be addressed are:

1. to introduce the principles of problem-solving frameworks; and
2. to provide examples of how problem-solving frameworks have been implemented in EP practice.

3.3.i. Principles of Problem-Solving Frameworks

It is generally accepted that current EP practices adopt a method of enquiry which explores the perspectives of multiple stakeholders, and which further supports

holistic, systemic and collaborative lines of exploration (Kelly 2006, Beaver 1996, Monsen & Fredrickson 2008, Rhydderch & Gameson 2010, Wicks 2013, Annan et al 2013). The key objective is to achieve change, not only with the consultee, but with the system as a whole (Larney 2003, Wicks 2013) and is an example of the move away from traditional reductionist methods of assessment and intervention (Wicks 2013).

Problem-solving frameworks can provide a systematic approach for clarifying roles, expectations, objectives and outcomes, often facilitated by an EP, who is simultaneously harnessing complex psychological theory and methodology.

EPs will apply a wide range of differing theory and research when formulating and hypothesising. Monsen et al (1998) point out that there are differences between the 'espoused theory' of practitioners and that which is their actual practice ('*theory in action*'). However, if applied rigorously, problem-solving frameworks can facilitate critical reflection, encouraging EPs and other professionals to evaluate their own constructs, values and assumptions, and in turn, the implications they possibly have on their practice (Gameson et al 2003, Woolfson et al 2003, Gameson et al 2005, Kelly 2006, Monsen el al 2008, Rhydderch and Gameson 2010, Wicks 2013, Annan et al 2013). Therefore, rather than being used prescriptively, they should be used to guide practice and reflection by all members of the problem-solving partnership (Monsen et al 2008, Rhydderch and Gameson 2010).

In summary, frameworks provide EPs with a structure to gather and formulate assessment in the real-world:

> *(emphasis is placed) on the application of psychology to the process and the acknowledgement of systems around the child/young person and the influence of the children's environment*
>
> (Wicks 2013, p.156).

3.3.ii. Problem-Solving Frameworks in Practice

As discussed above, the aim of psychological problem-solving frameworks are to support EPs in breaking down complex concerns into manageable stages to determine appropriate assessment and intervention (Wicks 2013). These frameworks should reflect '*best practice'* (Annan et al 2013) within most types of an EP's practice, and at all levels working (e.g. the individual or organisation/system) by 'scaffolding' psychological knowledge and the application of theory:

> *practitioners are supported in becoming transparent, methodological, analytical and accountable in the work that they do and importantly in the quality of thinking that they engage in*
>
> (Annan et al 2013, p.92).

Kelly et al (2008) provide a plausible rational for TEPs to use psychological problem-solving frameworks during training and beyond, stating that:

> *the practice framework bridges the gap between theoretical models and the effective application of these in the applied context*
>
> (Kelly et al 2008, p.18).

There are a number of frameworks which present an innovative, systematic approach to clarifying professional concerns, informing objectives and evaluating outcomes of professional involvement, through a number of systematic steps which aim to ensure that practice is clearly linked to appropriate theory (Kelly et al 2008). Such frameworks include: Monsen et al (1998 and 2008), Woolfson et al (2003) and Gameson et al (2003), all of which have been cited as appropriate and effective frameworks in a range of EP practice, including: consultation (Wagner 2000), systemic and organisational approaches (Timmins ,Shepherd, and Kelly, 2003), multi-agency working, and working with parents.

The Monsen et al 'Problem-Solving Framework' (1998) was initially developed to support TEPs to integrate the knowledge acquired during their training, when addressing the complexities of professional practice. The framework aimed to facilitate thinking and problem-solving, and structure the develop hypotheses by encouraging the TEP to draw upon a wide range of data collection and assessment methods (Table 3.2 provides further details about the Monsen et al model, and is also followed by a critique of the model in section 3.3.iii).

The Woolfson et al 'Integrated Framework: An Executive Framework for Service-Wide Delivery' (2003) aimed to build upon the existing strengths of the Monson et al

framework. The authors sought to develop a structure which could equally promote accountability and transparency (Woolfson, 2008), by reducing the number of steps involved in the process and creating a more 'user-friendly' framework. Their framework is transparent in structure:

> *in that its intention is that the EP is not the only person to be aware of what framework is being used and how the process of involvement and collaboration will continue.*
>
> (Woolfson, 2008, p.123)

Woolfson (2008) highlights the importance of working collaboratively with schools, parents and young people, throughout the problem-solving process, to ensure that their contributions and perspectives are valued and incorporated. The framework aims to facilitate mulitagency working and multi-level analysis and intervention within different systems (e.g. home and school), (Table 3.2 provides further details about the Woolfson model and is also followed by a critique of the model in section 3.3.iii).

Table 3.2 Overview of established problem-solving frameworks introduced on TEP training course at University of Birmingham

Aims/criteria	Monsen et al (1998, 2008)	Woolfson et al (2003)	COMORIA (2003, 2005, 2010)
Clearly identifiable theoretical underpinning	• 'progression-by-steps' approach to applied problem-solving (p.71). • Influences by 'information-processing theory' (p.71, 73).	• Aim to make explicit and integrate two additional (to Monsen et al 1998) conceptual influences: ecological systems approach and interdisciplinary collaboration (p.122). • Embedded Bronfenbrenner's social ecology model into the framework (p.122).	• Promotes iterative and/pr recursive processes similar to action research (although action does not have to be linear) (p.97). • Maintains the view that all knowledge and views are socially constructed through language, within cultural and historical contexts (p.101). • Promotes systems theory (p102). • Acknowledges that certain approaches/theories are based on what is available at the time and subject to a dynamic change process (p102).
Facilitates reflection of psychological theory at each stage	• Domain-specific knowledge and experience is called upon during the hypothesis-testing stage (p.79). • TEPs require graded experiential opportunities to solve 'real problems' (p.80). • Encourages TEPs to organise information conceptually, using content knowledge of the discipline psychology (and own experience) to guide hypotheses (p.81). • Promote the use of supervision to develop TEP's thinking (p.81).	• Encourage EPs to address the complexity of the problem by examining the social system (p.121). • Does not focus on one specific method of assessment, intervention or theoretical orientation, rather aims to scaffold/accommodate EP's individual psychological expertise (p.131).	• Key decision points are supported by a series of reflective and reflexive questions (p.96). • At each decision point all relevant people are encouraged to: reflect together on issues emerging from the main aspects of the core, consider alternative ways to reconstruct the problem, consider what needs to be done next (p108).
Flexible, yet structured	• Originally developed to assist TEP better integrate the knowledge acquired through training (p.69) • Need for robust problem-solving approaches which are conceptually broad, as well as being parsimonious (p.69). • Need to integrate problem dimensions in systematic manner (p.82).	• Reduce the number of steps (from the Monsen et al 1998) for experienced EPs. Assumes many steps are internalised through experience. Aiming for a user friendly framework (p.122).	• The core underpins all aspects of the process (of change and reflection) (p.96). • Flexibility is essential: enables people to choose how they use the model depending on circumstances and context (p.96). • Can be used as a coherent structure, with a clear set of inter-related functions and processes to guide thinking and actions to promote change (p.96).

Aims/criteria	Monsen et al (1998, 2008)	Woolfson et al (2003)	COMORIA (2003, 2005, 2010)
Promotes/facilitates change process	• The goal state is reached through a series of 'moves' which make connections between the initial problem state and the goal state 'Moves' should be evaluated regularly to check they are moving towards the goal (p.76). • Goals should be specific and evaluated (p.76). promotes hypotheses testing to overcome temptation to simply use means-ends analysis (p.77)	• Analysis and intervention to be focused at: child, class, school, family and community levels (p.123)	• Explicitly focuses on the process and language of change (attempting to integrate 'identification', 'treatment', 'assessment', 'intervention', 'problem definition', 'problem clarification', and 'solutions') which are reframed and reconstructed within the change process (p.97). • Advocates that outcomes should be monitored and evaluated in relation to local, specific, unique and changing contexts to facilitate change (p101). • Collaboratively construct and establish the criteria for success (p.110). • Promotes regular reflection on the process so far, reflection upon people's role/skills/capacity for change to occur (p.110).
Promotes and facilitates multi-agency and multi-level working, analysis and intervention	• Promotes collaborative formulation and goal setting (p.76) • Positions the EP as 'expert' "this process would require the psychologist to test out that what he or she (the teacher) was doing was actually helping them to achieve the goal" (p.76). • Advocates that TEPs should consider different levels of analysis and intervention: biology, cognitive, behaviour and environment (p.82).	• The authors sought to develop a structure which promoted accountability and transparency for both the EP and service users (p.122). • Promotes collaborative working , framework designed to be shared with stakeholders to promote shared understanding of the concern (p.123). • Promotes interdisciplinary and/or transdisciplinary coloration to agree joint goals (p.123). • Appropriate for casework with a concern that centres on a group (p.131)	• Designed to be used across a range of contexts and at different levels with a variety of individuals, groups and organisations (p.96). • Promotes a systemic approach which takes account of complex systems, aims to promote change within the system (p103). • Promotes positive partnerships and collaborative working , ensuring all relevant people are informed/involved in the change process whilst each stakeholder retains full ownership of what to do next (p.104).

(Page numbers correspond with Woolfson et al 2008)

Key aims/objectives for my piece of casework
Limitations from a TEP perspective who is in the process of developing expertise

The ‘Constructionist Model of Informed and Reasoned Action’ (COMORIA), developed by Gameson et al (2003) aims to facilitate reflective and reflexive questioning throughout the collaborative problem-solving process. Table 3.2 provides an overview of the key principles of COMORIA which is followed by a critique of the model in section 3.3.iii. Section 3.4 provides a detailed account of the framework in relation to practice and 3.4.v provides a rational for why COMORIA was selected for this casework.

3.3.iii Critique of problem-solving frameworks

Wicks (2013) notes that the role of the EP has changed from being diagnostic, to working as a collaborative problem-solver, she notes that this change in role is also reflected in the developments of the frameworks adopted by EPs. Wicks continues to assert that frameworks such as those described above, can help EPs work within *broader* and *more complex ways of working* (p.154), however, she does question the effectiveness, flexibility and use of these frameworks in ‘real-life’ practice (Wicks 2013).

Many training providers incorporate training in psychological problem-solving frameworks within the core of the educational psychology training course (Kelly et al 2008). However a recent literature search (February 2013) indicated that there still remains little literature or research on the role or effectiveness of such frameworks (Wicks 2013). Research which is available is informed by limited sources. Much of the published research regarding the use of problem-solving frameworks in practice is based on studies which have been conducted with experienced or practicing EPs (Kelly 2006, Rhydderch and Gameson 2010, Wicks 2013) and many suggest that as practitioners become more experienced, frameworks become more internalised and automatic (Annan et al 2013).

Findings from research conducted with TEPs suggest that TEPs have used frameworks with varying degrees of confidence and success (Rhydderch and Gameson 2010). Many frameworks (e.g. Monsen et al 2008) assume the *autonomy* and *knowledge* of the EP (Kelly 2006).

Many of the frameworks introduced in this paper emphasise the importance of drawing upon a wide range of psychological theory which is shared with key stakeholders (Woolfson et al 2003, Gameson et al 2003, 2005, Monsen et al 2008, Kelly et al 2008, Gameson et al 2010, Wicks 2013). However, not all frameworks state that the underlying psychology is made explicit, which may raise questions regarding transparency and ethical considerations (Wicks 2013).

The remainder of this paper provides an example of how many of these limitations were overcome by using a carefully selected framework in an attempt to transfer training into practice, in particular the generation of hypotheses and action (Kelly 2006) in order to bring about change at a systemic level (Rhydderch and Gameson 2010).

3.3.iv Rationale for selecting COMORIA

The aims and criteria I prioritised for selecting a framework for this particular piece of work were:

- Clearly identifiable theoretical underpinning
- Facilitates reflection of psychological theory at each stage
- Flexible, yet structured
- Promotes/facilitates change process

Table 3.2 provided a summary of how three problem-solving frameworks (introduced on the University of Birmingham Doctoral Training course) address and met each of the criteria above.

This paper was not concerned to determine if one framework was better than another, rather I was concerned to identify an appropriate framework for the selected casework. The points made in Table 3.2. illustrates that each of the problem-solving frameworks considered have strengths and limitations regarding the criterion set for this work, in general, each one could have been selected.

Monsen et al's 'Problem-Solving Framework' (2008), takes account of biological, cognitive and behavioural factors, drawing attention to the importance of how these aspects interact with environmental factors, enabling an increased breath of assessment and intervention (Wicks 2013). Woolfson et al's 'Integrated Problem-Solving Framework' (2003), draws attention to the role of different stakeholders and the particular contributions of the EP. Both the Monsen et al (1998 and 2008) and Woolfson et al (2003) frameworks have been criticised for being reductionist to some extent, and for being less bi-directional than other frameworks (Wicks 2013, Annan et al 2013).

Rhydderch and Gameson (2010) state that the COMORIA model can be used in a sequential manner if necessary, allowing practitioners to be as flexible as needed (Wicks 2013). I aspired to select a framework which was flexible in enabling me to respond to the casework as concerns/problems or solutions arose, however as a TEP still in the process of developing skills in multiple-level formulation in complex situations, I also sought out some degree of structure and guidance from the framework to ensure

intellectual rigour and *accountability* (Annan et al 2013, p.92). The COMORIA model does not assume EP knowledge (Kelly 2006) and experience, and has been described as addressing qualitative aspects of specific layers of practice (Kelly 2006).

Psychological problem-solving frameworks which focus on change can further enhance the purpose of assessment and intervention (Wicks 2013). The focus on change is a key element in the COMORIA framework. I considered that the Monsen et al framework would have been useful in supporting formulation to inform intervention, however the initial starting point for this case was concerned with bringing all stakeholders together in an attempt to initially identify what and what changes were required with the whole system (individual, family and school).

Section 3.3.iii identified a number of criticisms of problem-solving frameworks, one of which being the extent to which psychological theory was made explicit to stakeholders (Wicks 2013). Annan et al (2013) consider that sharing the psychological underpinning with stakeholders also enhance collaborative working, which in term will promote ownership and is likely to have a positive impact upon intervention outcomes. COMORIA has psychological theory placed at the core of the model (social construction and systemic thinking), this will be discussed further in 3.4.v.

Whilst some problem-solving frameworks (including Monsen et al 2008 and COMORIA) have been criticised for potentially confusing stakeholders by being over theoretical (Kelly 2006), the COMORIA model was selected as the framework of choice for this particular piece of casework, mainly upon the grounds that i) the model aims to promote an integration of different theory and methods, within a *structured, reflective and reflexive*

process, which is applied with *rigor and integrity*, ii) the model provides a framework for *promoting the process of change* at different levels and contexts (e.g. in this case, individual: Jimmy and whole class), and iii) the authors of the model advocate that the EP shares with service users the theoretical position that they are applying. It is considered to provide a 'heuristic' set of procedures: *enabling people to discover solutions for themselves*, with the support of carefully worded questioning (Gameson et al 2003, Kelly et al 2008, Wicks 2013).

The following section provides a worked example of a sample of casework for which the COMORIA framework was applied to structure my contribution in addressing the concerns raised by school staff regarding one pupil (Jimmy).

3.4 The Constructionist Model of Informed and Reasoned Action (COMORIA)

The aim of this section is to introduce COMORIA as a problem-solving framework used in EP practice and EP training. I will provide a worked example of how I used the COMORIA framework to organise my thinking and practice when I supported school staff to address the needs of a child at risk of exclusion. Firstly, I will briefly describe the key principles of the COMORIA model and the underpinning theory. The structure of the model, including, the main functions of the core and the key decision points will be discussed in relation the case study, with reference to the psychological theory informing my thinking at each stage.

3.4.i. Background

The COMORIA model was developed at Cardiff University during the 1990s for the Educational Psychology masters training course. The initial intention was to develop a practical model to explore the implications of different theories, models and belief systems influencing practice decisions. It has subsequently continued to be a model employed to support TEPs throughout their doctoral training, newly qualified EPs and ongoing EP practice (Rhydderch and Gameson 2010).

3.4.ii. Theoretical Perspective

Gameson et al (2003, 2005, and 2010) position EPs as practitioners working with service users to facilitate effective change, without fostering a dependence on experts, and ensuring they have 'added value' by empowering service users to understand and manage their own questions and change. They claim the model:

> *provides a structured approach to professional practice across different agencies and aims to focus directly on the process of change with high levels of rigor, integrity and accountability*
>
> (Gameson et al 2003, p.106).

Emphasis is placed upon the terms 'constructing', 'flexible' and 'integrated'. Gameson et al (2003) stress the importance of practitioners remaining alert to the interactive nature of their involvement. Throughout the problem-solving process, Gameson et al (2005) continually highlight the importance of EPs' awareness towards stakeholder's socially

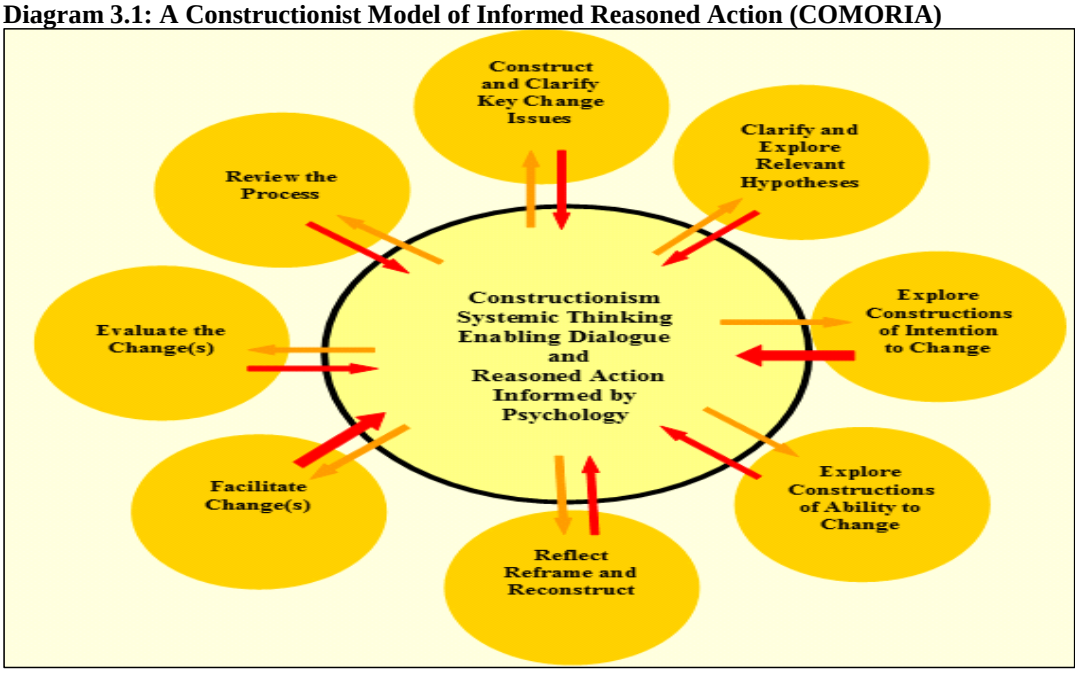
constructed theories and discourses, and their own constructs, all of which will influence the theory and methods implemented. This will be considered in more detail in 3.4.v.

The model adopts differing perspectives which offer different conceptual frameworks and practices, as opposed to practice being determined by competing approaches, which risk being dominated by '*fashionable*' paradigms (Gameson et al 2003, p.98). They strive to develop a model which is flexible to accommodate diverse situations and contexts, each of which endorsing their own unique values and constructs.

3.4.iii. The Structure of COMORIA

The structure of COMORIA is illustrated in Diagram 3.1. The model consists of the Core at the centre of the model, emphasising the underlying principles: social construction, systematic thinking and enabling dialogue which inform decision making. The outer circles indicate key decision points which can be entered and re-entered at any time, in the order which is most appropriate to the individual case. The arrows indicate the flexible movement between the core and outer circles (Gameson et al 2003). The Core and the decision points drawn upon will now be addressed in relation to my practice, when I supported school staff in assessing the needs of a child at risk of exclusion and to inform an evidence-based intervention plan.

Diagram 3.1: A Constructionist Model of Informed Reasoned Action (COMORIA)



(Gameson et al, 2003, p.100)

3.4.iv The Core

The main function of the core is to encourage EPs to explain the structure of the model and its operational procedures to relevant people. To understand the perspectives of all relevant stakeholders, and to explore how they are constructing the concerns, I used reflective and reflexive questioning. It was during this process that a wider range of other alternative explanations were also introduced and considered. Through this process, jointly agreed discourses and methods were established.

As mentioned, the core has three underlying principles: social construction, systemic thinking and enabling dialogue. I will now provide an overview of relational factors under each principle, with the aim of providing context information in relation to Jimmy.

Exploration of the key decision points will provide further detail and insight in the problem-solving process.

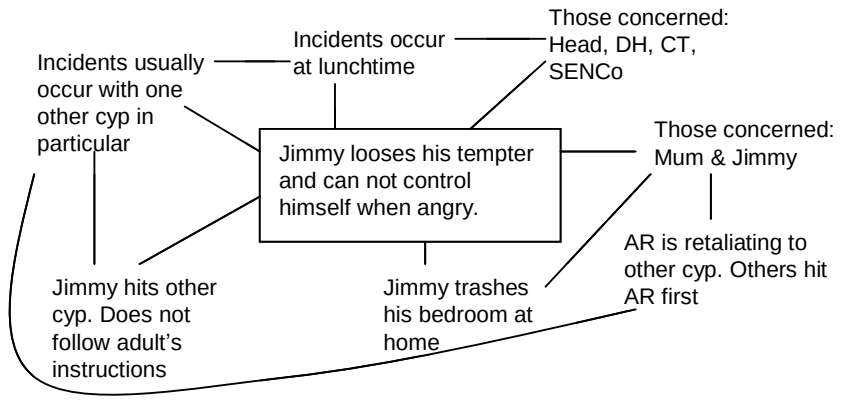
3.4.v Social Construction

Social construction maintains that individuals, groups and organisations hold their own views of a situation, which in turn influences how they interpret events. EPs have apply psychological approaches to practice which are based upon their own individual beliefs and attitudes (Wicks 2013). Social constructionist perspectives do not aim to develop universal causal laws which could be generalised across a number of contexts, rather, as they aim to explore the perspectives of key stakeholders in an attempt to understand how they understand the presenting concern (Annan et al 2013).

> *Constructionism provides a meta perspective within which many theories and approaches may be applied to help people understand and manage their change issues and choices. The important principle, however, is that all such theories are seen as valid alternative constructions of events rather than alternatives that are either right or wrong, better or worse, good or bad etc*.
>
> (Gameson et al, 2003, p.101).

Therefore, the application of psychological theory is constructed in context and in response to 'local need'. Diagram 3.2 illustrates some of the key stakeholder's (parents & school staff) constructs and descriptions of Jimmy's behaviour.

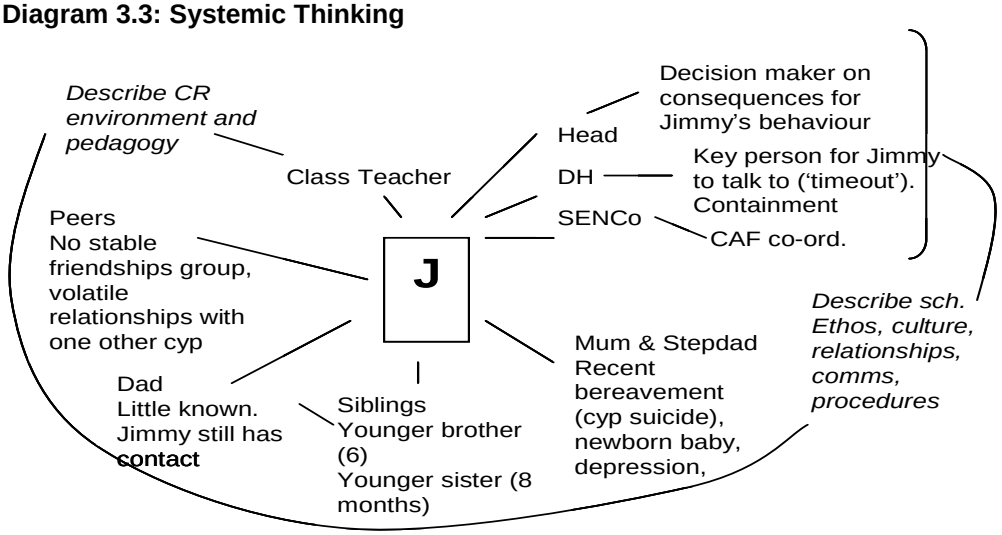
Diagram 3.2: Social Construction



3.4.vi Systemic thinking

Systemic thinking enables questions to be considered within an holist framework. Strategic thinking aims to promote 'deeper' strategic change, as opposed to reactive and palliative responses (Gameson et al 2003). Diagram 3.3 provides an overview of the environment in which Jimmy lives and some of the potential factors impacting upon the current situation.

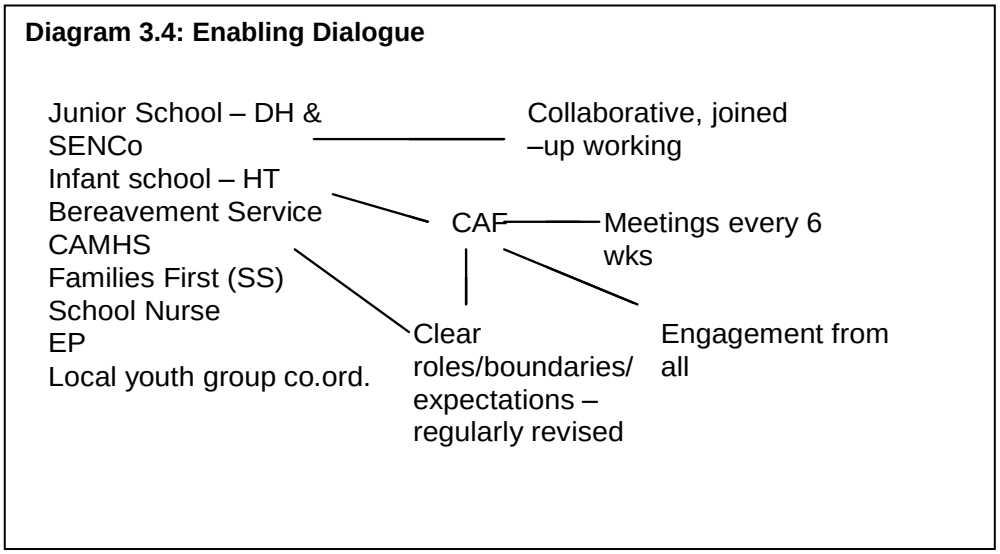
Diagram 3.3: Systemic Thinking



3.4.vii Enabling dialogue

Enabling dialogue is an essential part of this framework. The initial request for my involvement arose out of actions from an existing CAF meeting. The CAF meetings provided a forum for which all voices could be heard and valued. Diagram 3.4 shows the number of services involved in providing support to both Jimmy and his family in a wider context. During the CAF meetings, relationships and role boundaries could be clearly defined and work reviewed and negotiated accordingly. The aims of the CAF meetings were to facilitate engagement and bring about positive change at all levels within the system and to empower, promote self-efficacy and independence both for Jimmy and for his mother.

Diagram 3.4: Enabling Dialogue



The key decision points are intended to guide the process. The points are designed to help service users and the EP to make appropriate choices, each of which are supported by reflective and reflexive questioning. The following sections provide an overview of the actions and discussions at each of the key decision points entered throughout the

process. I worked closely with the SENCo and during the initial meeting I introduced and explained the COMOIRA model. It was collaboratively decided that the most appropriate starting point would be '*constructs and clarity key change issues'*.

3.4. viii Constructs and clarity key change issues

This decision point was explored following the initial request for EP involvement. Information was gathered during the first CAF meeting. This information is summarised in Table 3.3.

There were a number views presented in terms of how key stakeholders were constructing the problem. Most notably, school staff viewed Jimmy's behaviour from a within-child perspective: Jimmy is the problem holder, it is him who needs to change. In contrast, parents asserted that it was school staff and the environment which needed to change; staff needed to change the way in which they managed Jimmy's behaviour. Mum reported that Jimmy's behaviour was a response to the punishments received at school, e.g. exclusion.

Before meeting Jimmy in person, it was important that as the school's TEP, I afforded sufficient time to understand the interactions, relationships and communication within the system in order to understand the child (Fox 2009).

At this point, the focus of change was at an individual level (Jimmy) (from school staff's perspective). In contrast, parents perceived that change was required at the organisational level (the school's behaviour policy and management of incidents). I

hypothesised, based on the discourse between home and school, that the problem appeared to be escalating as a result of the interactions between key people in the system (home and school), Jimmy's needs needed to be viewed within this system (Fox 2009). Fox argued that:

> *EPs needed to adopt systemic thinking at an organisational level in schools to challenge the reluctance of adults to change when they see the problem as child-centred, suggesting that families and schools needed to work together in order to produce interrelated change in both systems*
>
> (Fox, 2009 p.249).

At this stage it was important to try and create a new narrative which helped to explain what was happening, and to help people move forward at an organisational level. The CAF provided the forum for these actions to be collaboratively agreed.

It was jointly agreed that the next steps of my involvement would be to i) explore Jimmy's perspective of the concerns and ii) further explore the concerns held by individual stakeholders within the school (the SENCo, Deputy Head Teacher and Class Teacher). The methodologies and findings are discussed throughout the next decision point: c*onstructs and explore relevant hypotheses*.

It was also collaboratively agreed that the focus of my information gathering would be within the school environment. It was deemed that parents were working closely with Family Support Workers and bereavement counsellors, therefore to it was important to

Table 2.3: Construct and Clarify Key Change Issues

Questions asked	Responses				
	SENCo	Class teacher	Parents	Jimmy	TEP
What general and long term things need to change?	Jimmy's aggressive behaviour towards other children. Jimmy being able to manage his feelings more appropriately. Jimmy being able to calm himself down quicker.	Jimmy to be polite to the teacher and not answer back. Jimmy's aggressive behaviour towards other children. Jimmy to follow the teacher's instructions. Jimmy to be able to take on board other people's suggestions.	Jimmy to be listened to and not always be blamed for lunchtime incidents. The school to find alternative means to punish Jimmy, rather than exclusion. Support for Jimmy to help him manage his anger and frustrations.	Jimmy to be listened to and not always be blamed for lunchtime incidents. The school to find alternative means to punish Jimmy, rather than exclusion.	Improve communication between home and school. Develop a shared understanding of the concerns. Develop a consistent and supportive approach for dealing with Jimmy. School and home to develop a greater understanding into why Jimmy was behaving in such a way.
What specific and short term things need to change?	Understand the triggers to Jimmy's behaviour. Reduce the number of violent outbursts from Jimmy. Find an alternative to exclusion.	Jimmy to be polite to the teacher and follow instructions. Understand the triggers to Jimmy's behaviour. Reduce the number of violent outbursts from Jimmy.	School to stop excluding Jimmy. Understand the triggers to Jimmy's behaviour.	School to stop excluding Jimmy.	Support school and home to understand the triggers to Jimmy's behaviour. Reduce exclusions. Develop a shared understanding of the concerns. Develop a consistent and supportive approach for dealing with Jimmy.
Who needs to change these?	Senior management team Jimmy Parents	Senior management team Jimmy	Senior management team	Senior management team	Senior management team Jimmy Parents EP Parent Support Workers
What is assumed about/expected from other services?	Co-ordinated and collaborative working to bring about change in all aspects of Jimmy's life (home and school)	Recommendations for managing Jimmy's behaviour and improving relationships within the classroom.	To understand why Jimmy is behaving the way he is.	To encourage the head teacher to listen to Jimmy's account of events. To stop the exclusions.	Co-ordinated and collaborative working to bring about change in all aspects of Jimmy's life (home and school)
When, where and how were they first identified?	Since Jimmy first started at the Junior School in Year 3.	Since Jimmy first started in Year 5.	Since Jimmy was little.	Since starting at the Junior School in Year 3	NA

(Questions adapted from Gameson et al, 2003, p.111)

avoid them feeling over burdened by the direct involvement of too many services. Parents retained links with the school regarding Jimmy's behaviour through daily meetings and were updated on my findings through the CAF meetings.

On reflection, I would surmise that by the end of the first CAF meeting, there were remaining tensions between home and school due to a recent period of exclusions which according to parents, had put considerable strain on the family at home. Despite these tensions, the SENCo and deputy head teacher reassured parents that as a school, they would work closely with the EPS to seek alternative means to manage Jimmy's behaviour, which would be supportive to the current family situation. Equally parents agreed to honour their commitment to seek bereavement support, which they hoped would strengthen their mental health and capacity to establish some stability at home for the children.

At this juncture, the COMORIA model provided a framework to organise my thinking, providing structured questions which could be modified to meet the needs of this individual case (Gameson et al 2005). Once familiar with the model and its underlying principles, I found it facilitated the working towards gaining a shared understanding of the concern from multiple perspectives, which was my goal at this stage.

Table 2.4: Construct and Explore Relevant Hypotheses

Questions asked	Responses				
	SENCo	Class teacher	Parents	Jimmy	TEP
What hypotheses are people constructing (factors causing or maintaining the concerning behaviours)?	Unstable home circumstances are preventing Jimmy from managing his behaviour at school. Tensions between home and school are preventing Jimmy form receiving a consistent message about what is acceptable behaviour. Exclusion is not an affective method of dealing with the concern as the behaviour is escalating.	Jimmy does not want to follow instructions. Jimmy wants everything to be on his terms. Other children do not want to play with Jimmy because of his aggressive behaviour.	Jimmy gets the blame for all incidents which occur during lunchtime. Jimmy is not listened to which makes him frustrated and angry. Following an exclusion, other children ask Jimmy lots of questions about what /why he was aggressive, this makes Jimmy even more frustrated. Exclusion is not an effective method of dealing with the concern as the behaviour is escalating.	Jimmy is not listened too which makes him frustrated and angry. Jimmy gets the blame for everything.	Has Jimmy actually acquired the skills to manage situations he perceives challenging? Are there any underlying difficulties (e.g. learning difficulties)? Does Jimmy have the language skills to express himself appropriately? What is the function of Jimmy's behaviour? Are there any other children present when the behaviour occurs? What are the circumstances in which the behaviour occurs? Does Jimmy have any status with his peers? If so, what is this status? What is Jimmy's perception of the concern?
At what level are people constructing these hypotheses?	Individual and home	Individual	System (school)	System (school)	System and individual

(Questions adapted from Gameson et al, 2003, p.112)

3.4.ix Explore constructs and relevant hypotheses

The aim of this decision point was to support stakeholders in exploring their belief systems, assumptions and expectations which are likely to impact upon the change process. These are summarised in Table 3.4. It was important to determine which factors are causing and maintaining the concerning behaviours.

Gameson et al (2005) maintain that flexible and skilful application of many psychological theories is one of the strengths to the COMORIA model. Theory supports the formulation of questions and hypotheses, and provides a structure for thinking about organisational needs and challenges (Baxter, 2000). It was during this process that I was able to draw upon and make use of a number of theories in an attempt to explore some of the causing and maintaining factors regarding Jimmy's behaviour. Table 3.5 provides an overview of some of the influencing theories which at this stage guided my hypotheses and methods for testing out hypotheses.

In summary, the theory overarching the development of my hypothesis is based upon the assertion that children's emotional development is influenced by a number of factors: individual differences, cognitive development, experiences and the environment in which they live.

Baxter (2000) presents an account for understanding patterns of behaviour, suggesting that *individuals need to be able to anticipate the future* (p.36). When there is significant change or turbulence in the environment, children may find it challenging to regulate their

Table 3.5: Guiding Hypotheses and Influencing Psychological Theories

Initial hypothesis	Possible theories	Methods of testing hypothesis
Social status with peers & exclusions	Humanistic – sense of belonging Social development	Whole class sociogram Discussion with class teacher Discussion with Jimmy Observations and Functional Behavioural Analysis
Language skills: does Jimmy have adequate language skills to communicate needs and feelings	Language and cognitive development	Language assessment, using the Clinical Evaluation Language Fundamentals, 4th Edition (CELF4)
Social awareness and communication: does Jimmy understand other people's actions	Theory of Mind Cognitive development	Observations and Functional Behavioural Analysis
Learning: Are there any underlying learning needs	Theories of learning Cognitive development	Achievement Scales using the British Abilities Scales 3rd Edition (BAS3) York Assessment for Reading Comprehension (YARC)
Home circumstance: is Jimmy's behaviour a response to recent circumstances, which have left the home environment relatively unstable and unpredictable	Humanistic – unmet needs Psychodynamic (result of unresolved conflicts) Classical Conditioning (learnt and maintained behaviours) Sociological/Culture (behaviour is influenced by the values and expectations existing in the current home context)	Not appropriate to explore further at this stage
The current school behaviour policy and general school ethos towards Jimmy's behaviour is very negative and punitive at the moment	Systemic (product of relationships and culture between aspects of the systems and sub-systems)	Discussions with Senior Management to review alternatives means to responding to Jimmy's behaviour outbursts. Analysis of behaviour records. Functional Behaviour Analysis to explore Jimmy's responses to the school behaviour policy: are the reactions by schools staff maintaining, reinforcing or eliminating Jimmy's behaviour?

(Adapted from Gameson, 2005, p.44)

emotional responses. It is through experience that children learn to construe the world in which they live, Baxter (2000) continues by suggesting that challenging behaviours are likely to be expressed at times when the individual feels most vulnerable, for example, when exposed to emotional demands which are perceived as challenging situations to manage effectively, observable behaviour may include: blaming, impulsivity irresponsibility.

Children must develop skills to regulate and adapt their behaviour in a range of situations and different contexts. Organisations, such as schools are complex social systems, with teachers and adults in a position to:

> *promote prosocial development by building secure relationships, creating classroom community, modelling prosocial behaviour, establishing prosocial expectations, and supporting families.*
>
> (Hyson and Taylor 2011, p.77)

Given that schools are complex organisations, it was essential that I explored hypotheses from a range of perspectives in order to understand what key stakeholders believed needed to happen to bring about change (Kelly et al, 2008).

Table 3.5 indicated how a number of hypotheses were explored, both at an individual level (Jimmy) and at a whole-class level to explore the social environment within which Jimmy lives in at school.

The findings from these hypotheses can be seen in Appendix 1. In summary, the sociometric data illustrated that Jimmy was socially isolated by all of his peers within his class, no children nominated Jimmy as a child that they would most like to play with. The findings from the achievement scales using the British Abilities Scale and language assessment suggested that Jimmy's skills in these domains were in the average or above average range for his age. Through the use of Personal Construct techniques (Beaver 1996), it became clear that Jimmy's vocabulary to express his feelings and thoughts was very under-developed. Jimmy had a tendency to take a very narrow and

fixed view of situations; he had difficulty understanding situations from other people's perspectives. Through classroom observations and through discussions with the class teacher, it appeared that Jimmy desperately wanted to seek approval and acceptance from his peers and teachers. A behaviour checklist was completed which signalled unstructured, social periods are a particularly difficult context for Jimmy to manage. At this stage it appeared that Jimmy was experiencing some difficulties regarding social understanding and communication.

COMORIA is based on the assumption that hypotheses are shared and jointly explored (this was achieved during CAF meetings and other school meetings) to enable the concern to be reconstructed collaboratively. Therefore, implications regarding further action within each level within the system led to next decision point: *reflect, reframe and reconstruct*.

At this interval, the COMORIA model was particularly useful in facilitating my thinking in developing hypotheses at multiple levels within the system (individual, family, school). Consideration was given to psychological theory in constructing plausible explanations as to why Jimmy's behaviour is currently a concern for both school staff and parents.

3.4.x Reflect, reframe and reconstruct

This decision point encourages all stakeholders to take stock and carefully and collaboratively reflect on the issues emerging from the four main aspects of the core: social constructionism, systemic thinking, enabling dialogue and informed and reasoned action, all in relation to information gained from other decision points (Kelly et al 2008).

Through this process we were able to consider alternative ways of constructing the problem dimensions which facilitated thinking about what action was required for change to be achieved. Table 3.6 provides an overview of how the stakeholders' revised constructions and concerns following feedback regarding the outcomes of the data collection.

This stage in the problem-solving process promoted the inclusion of the class teacher into the problem-solving partnership, facilitating all stakeholders (SENCo, deputy head, and class teacher) to be viewed as equals, with a distinct contribution to make (Doveston and Keenaghan 2010). At this stage I undertook a consultative role in facilitating the interpretation of the data with the aforementioned stakeholders, using and applying psychological theory.

The process of bringing about change fundamentally needs to build on existing practice and skills. Actions and interventions need to be responsive to the current situation, whilst remaining flexible and appropriate to the ever changing needs within a complex system. School staff were encouraged to consider contextual and systemic factors which may influence Jimmy's behaviour. Factors were considered from the perspectives of a number of subcultures that existed in the school: the individual level, friendships groups, the classroom and whole-school, we were interested in exploring the interactions between these groups in order to determine appropriate action (Farouk 2004).

Table 3.6: Reflect, Reframe and Reconstruct

Questions asked	SENCo	Class teacher	Jimmy	TEP
Have relevant people chosen to implement all relevant aspects of the process so far (engagement)?	Very engaged, fully committed to all responsibilities/actions agreed.	Very engaged, willing to openly and honestly discuss Jimmy's behaviours and the challenges/difficulties she was experiencing in trying to manage his behaviour.	Jimmy was willing to engage with me during 1:1 sessions.	
How have you chosen to review your role in the process, how has it facilitated change and empowered appropriate people?	Through discussions and observations with the class teacher, it became apparent that she felt 'out of the loop' with regards to any discussions and decisions that were made by senior management about Jimmy's behaviour. She felt that at times, there were inconsistencies between the way she was managing Jimmy in class and the way in which senior management responded. Through discussions with the SENCo and deputy head, I was able to sensitively suggest that the class teacher became part of our meeting when we agree appropriate targets and actions. Following on from this the class teacher has been part of all decision making.			By working with different people within the system (SENCo, deputy head, class teacher and Jimmy), I had the opportunity to view the concern from a number of perspectives. It became clear there were two distinct sub-systems within the school: senior management and the class teacher. I surmised that there was little communication or shared understanding of the concerns. Therefore I felt it important to try and bring these two sub-systems together to overcome some of these barriers.
How can the issue be reframed in order to empower and facilitate further change?	Greater understanding about the impact of systemic issues concerns Jimmy's behaviour: now able to view Jimmy as part of a complex system and therefore a need to address issues both at an individual level and a whole-school/class level.	Improve dynamics and working relationships within the classroom	Whilst not yet at the stage where he was able to take responsibility for his actions, Jimmy did recognise that other children made him cross and his responses were getting him into trouble. Jimmy therefore said, the would like to work on ways to stop the other child getting him into trouble. Jimmy and I agreed to look at ways in which he could change his response to this particular child.	

(Questions adapted from Gameson et al, 2003, p.111)

3.4.xii. Agreed Actions

Based on the above findings, which are further elaborated upon in Appendix 1, Table 3.7 illustrates the recommendations which were agreed through a consultative process.

Table 3.7: Recommendations and Agreed Actions

Area of development	Aims	Intervention	Context	Person responsible
Literacy	Develop spelling skills so that they are inline with his other literacy skills (e.g. comprehension)	Precision teaching/direct instruction	1:1 10 minutes daily	SENCo
Language	Support Jimmy to develop his emotional literacy and language to express his emotions.	Direct teaching of emotional language	1:1 targeted programme Classroom	TEP Class Teacher
Self management skills	Support to help Jimmy understand and manage his emotions and develop his empathy and social interaction skills. Develop Jimmy's sense of self-efficacy. Support to help Jimmy manage endings and transition times.	CBT intervention Opportunities for learn from peers (modelling), develop his relationships with in his peer group, develop group dynamic within a controlled and structured environment. Visual aides within the classroom	1:1 targeted programme Classroom Classroom	TEP Class Teacher Class Teacher

The recommendations identified in Table 3.7 were shared with all professionals at the next CAF meeting. This process allowed for a shared understanding of Jimmy's need, taking into account systemic factors.

It was negotiated that the EPS would continue to provide support to school staff and to Jimmy to further develop Jimmy's self-management skills. It was agreed that I

would work closely with the class teacher to further develop the class dynamics and working relationships. Based on the findings from the sociogram, the functional behavioural analysis and from observations it was felt that Jimmy would benefit from a 5 week Cognitive Behaviour Therapy (CBT) intervention. It was also agreed that the class teacher would adopt a whole-class approach to improving relationships within the classroom as part of my on-going support in the role of the school's TEP.

3.5. Discussion

The aim of this paper was to describe how I, in my role as a TEP, supported a mainstream junior school to explore realistic solutions and strategies to effectively manage the behaviour of a Year 5 boy. School staff were concerned about the school's capability to meet this child's needs. The COMORIA model was employed as a psychological problem-solving framework to facilitate the application of psychology in a complex and multi-level context.

Throughout this work, the COMORIA model proved to be an effective model for supporting me to remain focused on psychological theory throughout the process. It provided a framework for which I was able to focus on the application of theory in a collaborative manner.

One of the criteria identified for selection of a framework for this piece of casework included clearly identifiable theoretical underpinning. The COMORIA model is positioned within a social constructionism perspective, composed of four key characteristics: social constructionism, systemic issues, enabling dialogue and

informed and reasoned action. Therefore in order to use the framework as intended by the authors, it was important to explore the constructions of individual members of the system, whilst remaining 'tuned in' to the culture and ethos of the wider school system. It is acknowledged that some degree of reductionism was required in order to make sense of the change process within a complex system, this has previously been raised as an issue with approaches derived from social constructionism (Kelly et al 2008). In an attempt to overcome some of these challenges, during school meetings I promoted; i) open and honest discussions regarding: role definitions and boundaries, ii) ensuring the appropriate professionals were included in the change process, iii) ensuring that those who were involved in the change process felt that had an opportunity to make meaningful contributions, and iv) ensuring that all findings were analysed and interpreted collaboratively. As a consequence actions and recommendations were considered to be appropriate and responsive to the school culture and reflected the capacity of existing skills within the system. Further evaluation is required to determine if stakeholders also share these views (Fallon et al 2010, Wicks 2013, Annan et al 2013).

A key characteristic of the COMORIA model is the emphasis on bringing about change. With this in mind, the process of change and how this would be achieved was a focal point of discussion throughout, using solution-focused questioning techniques (Beaver, 1996). Discussions included, identifying who would facilitate this change. Creating a shared understanding of the concern promoted the inclusion of other stakeholders (e.g. class teacher) whom had previously been excluded from decision making.

Whilst a number of benefits of using the COMORIA model to support problem-solving thinking have been discussed throughout this paper, there were also a number of limitations which were either overcome or need further consideration.

Whilst working with the school, I was aware that at times, the application of psychological knowledge was often occurring at an unconscious level. I used supervision to ensure that the psychology was explicit and to reflect upon the merit and appropriateness of differing psychological theory within the given context.

COMORIA has been considered a time-consuming model in a number of texts (Kelly et al 2008, Rhydderch and Gameson 2010, Wicks 2013, Annan et al 2013). From my perspective, I found the model useful as a reflection tool, however from a practical point of view, it was often difficult to secure time in which all key stakeholders came together to fully explore the nature of the concern to reach a shared understanding. As a consequence, much of the discussions were with the SENCo and deputy head, I relied on third parties to reply the outcomes of these discussions to the class teacher. Whilst the class teacher was part of the key discussions and decision making stages, it would have been more effective to have all stakeholders present for all discussions. In addition, given the complexity of schools as organisations, it was inevitable that many of the discussion and solution-focused thinking occurred incidentally, through informal discussions with the deputy head and SENCo.

Continuing with the theme of time constraints when using a problem solving framework, such as the COMORIA, the DECP further states:

> *Due to pressure of work, school psychologists may fall into crisis routines, rather than following systematic procedures for intervention planning, monitoring and evaluation.*
>
> (DECP, 2000, p.17)

As a TEP, with a reduced caseload to accommodate comprehensive training and development, the COMORIA provided me with a structured, flexible and coherent framework (Gameson et al, 2010) for engaging in professional practice. It ensured the robust application of psychological theory was explicit and reflected upon during the change process. Supervision sessions were used to ensure that sufficient time was afforded to apply the COMORIA model and principles at each stage of the work. Supervision support, alongside the supportive appendices (templates for reflection) set out in Rhydderch and Gameson's 2010 paper, enabled to me meet a further aim I had set as a criteria for this problem-solving framework: to reflect on my role within a number of inter-relating systems at each stage of the change process (Annan et al 2013).

Gameson at el (2010) sought to develop a theoretical framework which:

> *Would ensure that all of their (practitioners) work would have the following distinctive collection of features: the importance of inter-relatedness of systems, context and interpretations; a strong psychological foundation; the ability to apply and interpret a variety of research methodologies; the knowledge and skills to engage, enable and empower service user; a consistent focus on promoting and managing*

> *change; and a commitment to embedding on-going evaluation through work with service users.*
>
> (Gameson et al, 2010, p. 133)

On reflection, I feel through using the COMOIRA model I achieved the goals set out by the authors and met the criteria set out for selecting an appropriate problem-solving framework for this piece of work. The ability to work in a systemic manner and reach a shared understanding of the concern was largely due to the flexibility of the framework, which retained robustness and transparency throughout. Whilst this model has been previously criticised for being overly complex, which may impact upon the usefulness of the model for stakeholders (Annan 2013), the SENCo, new to the role, said '*working within a structured framework, which had clear decision points and actions, supported her in being able explain the negotiated work to her line-manager. She was able to provide clear, succinct and rationalised explanations for the agreed actions and recommendations*.' On reflection, this feedback further supports the systemic nature of the COMORIA, highlighting that it is not just the EP/TEP who is working within a complex system, but also members of staff within a school who also have to carefully negotiate work and resource allocation.

This example of how the COMORIA model facilitated collaborative multi-layered working between a TEP and a SENCo, further advocates the continued need for EPs to work in more dynamic and systemic ways (MacKay 2002). A number of authors advocate that by sharing psychology with stakeholders (as demonstrated in this case example), the EP is working collaboratively, which can be argued is more likely to

have a positive impact upon intervention outcomes and longer-term change (Wicks 2013, Annan et al 2013).

In light of this statement, one of the strengths of the COMORIA is that it provides a flexible and integrated approach to the application of many psychological theories, when working within a complex system. Owing to the way in which the model is structured and presented, the authors reinforce the notion that applied psychologists need to apply their skills and psychological knowledge in a number of sophisticated ways, including the ability to:

> *(Understand) process issues as well as the sophisticated, flexible and adaptable application of different aspects of psychology (as opposed to the application of easy, pragmatic quick fixes) that define the unique and important role of applied psychologists.*
>
> (Gameson et al, 2005, p.44)

It has recognised that there is limited research in this area, particularly with regards to the effectiveness of frameworks in practice (Wicks 2013). Therefore, it is hoped that this case has provided a worked example of the contribution of a TEP in supporting an organisation to reframe their thinking to bringing about change using a problem-solving framework. Wicks (2013) suggested that further research was required in order to gain stakeholders' views on the effectiveness of problem-solving frameworks. Whilst an attempt was made to ascertain the views of the SENCo during this piece of work, it is acknowledged that more robust methods of evaluation

(e.g. GAS or TME) would have strengthened my contribution to this particular area of research and enhanced the effectiveness of my practice (Fallon et al 2010).

3.6. Conclusion and Reflections

In summary, I consider the COMORIA model a helpful framework for a TEP who is developing problem-solving skills and consultation competencies. The framework provided a structure for facilitating effective questioning with key stakeholders in an attempt to bring about change and collaboratively agree next steps. In addition, the COMORIA was also a useful reflection tool, that could be shared between me and my supervisor during supervision. Having now had the opportunity to become familiar with several problem-solving models during my training, I am confident that I will continue to draw upon them in my future practice (Wicks 2013) to ensure that my work is in-line with best practice guidelines (HPCP 2013).

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Appendices

Appendix 1: Data Gathering & Findings

		Percentile	Descriptor	Age	Hypotheses/case notes
YARC Reading	**Accuracy**	30	Average	8:7	Not a current priority
	Comprehension	70	Average	11:6	No concerns – semantic and general knowledge very good. Goes off on tangents, talking about related topics (e.g. animals – very knowledgeable about subject area) – anyone to share this interest with? (step-dad cropped up a lot)
	Single Word Reading	21	Average	-	Not a current priority
BAS3	**Spelling**	13		8:3	Discrepancy between word reading and comprehension He needed to know which he got right/wrong – gave himself 40/40
CELF4	**Con. &Foll. directions**			11:1	No language/understanding concerns Needed to get the answers right, kept checking my page, if saw a wrong mark wanted to know why – either insisted I misheard his answer or wanted to do it again until correct – doesn't want to fail
	Recalling Sentences			9:6	Easily distracted and looses his focus/forgets, faced wall to concentrate – improved recall
National Curriculum Levels	**Yr.4 Yr.5** **Maths** 3C 3B **Writing** 2A 2A **Reading** 3A 2A				Deterioration – impacted by behaviour, time off school, self perception
Sociogram			Rejected		
Classroom Observation (x2)	Very well behaved Engaged in activities most of the time (80% app) Not part of other children's group discussions – they find their own pairs and Jimmy doesn't feature in this. Wants teacher's attention Wants teacher's reassurance/praise/acknowledgement Likes sharing his news with the class (newspaper clipping)				Avoided/not included by other children Wants to please teacher Wants attention/approval from other children (dentist responses from other children) Motivated to work Likes structure/clear firm boundaries and expectations
Playground Observation (x2)	Runs over to group of boys – they do not acknowledge him Moves on to another group – joins in their game Playing with group of boys – running around Each time another child (OT) comes over to me Jimmy comes over (close proximity) Last 10 minutes of lunch spent in classroom with TA developing his game – very calm, wants to go inside, enjoys explaining his game in detail, does not want to tidy away.				Social status/position? – rejected by the boys he wants to play with? Included inconsistently? Able to join in already established games (structure) Endings/transitions in busy environments (structure/noise) Wants to work in a quiet, calm and structured environment at lunchtime Territorial

	Responds to firm and clear boundaries from TA. OT comes to show me something he has made – Jimmy does not look impressed. OT says teacher says you may work with me too Jimmy: "Not in my time you won't!"	
ABC Observation	1 incident in 6 days PE lesson (PM) (awaiting information)	Different teacher (outside agency) Less structure Higher risk of failure/exposure?
Behaviour Checklist (class teacher)	(24) Aggressive/disruptive (pupil orientated) (23) Aggressive/disruptive (Adult orientated) (20) Academic (18) Social and Emotional (15) Rules and routines (13) In/out of seat (12) Verbal noisy	Triggers identified – lunchtime, transition times, no activity/routine, OT
FBA questionnaire (Deputy Head)	Problems occurs at lunchtimes or change in routines (lesson/teacher). Behaviours sometimes linked to jealousy. Used to be 1-2 incidents per week, now 1-2 per month (very intense when does occur) Usually particular children present. Varies with adults Behaviour does not occur in class or assembly Other factors: major problems at home, parents discipline in an aggressive manner, no language to express emotions	Antecedents: direct requests, receives attention, transition times, academic activity, does not understand rules/situations/request, OT Behaviours: thumps, hits, shouts, brings up previous incidents Negative reinforcers: exclusions, loss of privileges Positive reinforcers: stickers, TA at lunch, 10 minutes on own in the classroom before end of lunch, someone to talk to/go to
Scatter Plot	1 incident in 6 days At lunchtime Jimmy wanted to stay in the classroom and read his book rather than go outside. Asked twice then went outside to play	Wants to work in a quiet, calm and structured environment at lunchtime Jimmy is aware that lunchtimes are likely to be problematic/difficult to manage? Friendships?
PCP – 'The Future Jimmy'	Wife, children, job (army), car, helicopter, money, big house, three children, two dogs, snake, boxing champion, play-station	Positive future aspirations Unable to link behaviours now to consequences on future choices
General discussions with Jimmy	Gave school 4.5/10 Likes the teachers, the children and the dinners are nice Negative attitudes towards the head teacher – not at school enough, too much time at the infant school, need more money spending on activities for children, should not send children home when naughty – should give after school detentions. Compares this school with his infant school (head, punishment etc)	No language to describe feelings – descriptive of event ('he said, she said..') Aware of who/when he has difficulties Relationship with OT key factor Avoids failures (need to get answers correct) Trust - becoming more open with me about incidents etc, checks out with me – 'will you show anyone?', 'I cant tell you' (the precedes to a few minutes later) Ability to identify/reflect on his actions? Very family orientated (only refers to family members, not friends)

	Lots of talk about another child (OT) – annoys him, OT is jealous of Jimmy (material comparisons), takes his place (seat, in the line), makes him cross, can not stay calm with him. Lots of references to family life (what they do, who has what, bedroom, activities, helping) Talked about incidents in school leading to exclusions – sees unfairness in punishments (makes home worse), feels like he gets the blame, adults do not see what other children do Says there are no problems in class as the teacher is there	Inflexible thinking?
General discussion with School Staff	Academically sound (levels have dropped due to behaviour) Nice boy, esp 1:1 Descriptive when reflecting on incidents No language to communicate feelings Difficult home circumstances No obvious triggers Incidents at lunchtime Unaware of consequences Likes his own way One child in particular (OT) Previously difficult relation with parents (mum) Unable to calm down once blown Need for consistent approach throughout the school (amongst staff)	

CHAPTER FOUR

PPR 3: This paper presents a review of social skills training literature to determine if social skills training would form the intervention of choice to support Key Stage One mainstream primary school children who were reportedly expressing social, emotional and/or behavioural difficulties?

Abstract

A range of literature was consulted in order to identify what is already known about social skills training (SST), for the purposes of determining whether SST would be an appropriate intervention to support the development of social skills of Key Stage One children expressing social, emotional and/or behavioural difficulties. Emphasis was placed on behavioural-cognitive and ecological-behavioural approaches as they were considered to have a rigorous evidence-base for understanding how children learn, with consideration also given to the interactions between the child, environment and behaviour. Behavioural-cognitive techniques are also reportedly integral to many school behaviour policies and Educational Psychologists' practice. A critique of empirical research aimed to address the two key questions: i) what are social skills and SST; and ii) what evidence is there for the effectiveness of SST. With reference to the question of whether SST would be an appropriate method of intervention for Key Stage One children, the paper concludes that SST, grounded in behavioural-cognitive and ecological-behavioural theory now finds empirical support as a component of multi-method approaches to addressing social, emotional and/or behavioural difficulties which young children express. Appropriate assessment is required in order to tailor intervention to individual strengths and difficulties. Assessment should address the child's attributes (e.g. cognitive skills, developmental abilities (including language), and behavioural presentation), the role of others, and aspects of the contexts within which children live and socialise with others. Assessment data should then be used to consider if intervention is required: i) to strengthen the skill set of the individual, and/or ii) to influence the behaviour and expectations of others, and/or iii) to adapt the environment within which the children are expected to perform in socially skilful ways. SST should support, not replace those aspects of a school's culture and curriculum which support the development of appropriate social skills and social competence.

4.1 Introduction

The impetus for this paper developed from a request from a mainstream primary school for myself, in my role as a Trainee Educational Psychologist (TEP), to

develop and deliver a targeted social skills training (SST) intervention for a group of Key Stage One (KS1) (5-6 years old) children considered to be expressing social, emotional and behavioural difficulties (SEBD). School staffs' assumption of these children was that they did not possess particular social skills in their behaviour repertoire, resulting in poor behaviour and maladaptive relationships at school. Training to develop these skills was requested to help the children overcome these behavioural problems.

A social skill is considered any skill which facilitates interaction and communication with others. Through the performance of socially skilled sequences of verbal and non-verbal behaviour, social rules and relationships are communicated and adapted within the dynamic interactional process (Alexander 1986).

Gresham et al. (2001) argue that

> *the ability to interact successfully with peers and significant adults is one of the most important aspects of students' development. The degree to which students are able to establish and maintain satisfactory interpersonal relationships, gain peer acceptance, establish and maintain friendships, and terminate negative or pernicious interpersonal relationships defines social competence and predicts adequate long-term psychological and social adjustment*
>
> (Gresham et al. 2001, p. 331).

In the course of the lifespan developmental process, children normally learn socially accepted skills within their home and community, through the 'routine' processes of child-rearing and socialisation. However, in some cases, the conditions for learning adaptive/culturally approved social performance are incomplete, either because the child's environment and the nature of interactions with others provide poor conditions for learning and performing socially approved behaviours, or, in some cases, because children themselves have poor social information processing abilities which can compromise their capacity to abstract the rules of social behaviour, and/or relate readily to others, even within adaptive family and/or community environments (Thacker 1983).

The development of social skills training owes much to the pioneering research of the social psychologist, Michael Argyle and his associates. On his own admission, Argyle's interest in this broad domain could be traced back to his own childhood concerns for a childhood friend whose acute shyness and poorly developed social skills led to the boy's social rejection, isolation and deep distress. Argyle believed that the complexities of social interaction could be considered to be constituted by a set of discrete social skills which could be learned and integrated, in the same way as motor skills and their increasingly sophisticated integration and application within purposive, goal-directed physical action schema (Colman 2002). If skills were learned, they could be taught! This view led Argyle to establish a highly successful social skills training (SST) programme for adult psychiatric patients who were judged to cope poorly with people and social situations. The training used behavioural technology to facilitate the learning and performance of non-verbal and verbal communications skills, by modelling, opportunities for rehearsal with contingent

feedback, and on-going fine-tuning of sequences of action, to help the patients become fluent in their use of the target adaptive social skills, as described by Trower et al. (1978).

SST, based heavily upon this behavioural approach to teaching has subsequently been developed further and applied with other populations including young offenders (e.g. Alexander 1986, Spence 2013), school children expressing emotional and behavioural difficulties (e.g. Gresham, 1997) and children with high incidence disabilities (e.g. Gresham, Sugai and Horner 2001).

Initially, evaluation of SST affirmed the effectiveness of behavioural approaches to teaching in supporting the diverse target populations in developing and applying the focus social skills within the training setting; however, generalisation of skills across settings proved more challenging (Spence 1983, Alexander 1986), leading to increasing recognition that the SST needed to be more comprehensive in its remit if maintenance, generalisation and adaptation of social skills across settings were to be assured. Such support for generalisation required more than simply supporting practice in a wider range of settings, however; research with offenders (e.g. Alexander 1986) and those characterised by substance and alcohol misuse (e.g. Hamlin 1991, Eastman 1991) recognised that limitations lay not only with generalisation and adaptation of skills, but more fundamentally, with the social environment or 'habits' of these populations, and the extent to which performance of the approved social skills would indeed prove adaptive within these ecological niches. It was recognised therefore, that interventions needed to be multi-level and multi-modal, taking account not only of the social skills of target populations, but also

their social environments. Sheridan and Walker's (1999) ecological-behavioural paradigm, which is introduced in Section 4.2, provides a framework capable of integrating these complexities, alongside the need to accommodate the importance of social cognition, as well as social responses, as outlined below.

With reference to SST, the adequacy of its focus on developing children's social competence by teaching and supporting their performance of socially skilful behavioural responses was challenged by the work of Kenneth Dodge, John Coie and John Coie (e.g. Dodge and Coie 1987, Crick and Dodge 1994), whose research focused upon the perception of, and meaning attached to social information, which preceded and informed responses to social stimuli. These researchers drew attention to the importance of the relationship between '*characteristic (social information) processing styles and children's social adjustment, with some aspects of processing (e.g. hostile attribution biases, intention cue detection accuracy, response access patterns, and evaluation of response outcomes)*' playing a causal role in determining peer acceptance and status.

The research and contributions to theory development of the social information processing theorists influenced the form taken by SST, which, while retaining the behavioural approaches summarised above (e.g. modelling target skills and supporting opportunities for rehearsal with feedback), have extended their remit to include:

- Reading/considering the meaning of social cues, taking account of other contextual and historical cues;
- developing goals for responses to these;

- considering strategies likely to be effective in mediating desired outcomes within the given context;
- evaluating the probable outcomes of each strategy;
- selecting a strategy; enacting the strategy within a supported role play setting; and
- reflecting on and evaluating the skill with which the chosen strategy was implemented, its ecological fit and the extent to which outcomes achieved the child's goal.

Due to the sheer volume of literature relating to SST for students with SEBD (Magg 2006), this paper focuses on the evidence for SST methods employed in interventions in mainstream primary schools for teaching children appropriate social skills, in order to determine whether SST would be appropriate for KS1 children in a mainstream primary school.

There is considerable evidence that social skill deficits are implicated in educational impairment, emotional and behavioural problems, and can lead to great risk of adult psychopathology (Spence 2006, Scott 2008, Cook et al 2008). There is a significant move towards mainstream schools providing social inclusion for all children (Denham et al 2006), and the teaching of social skills as part of many schools' general curriculum (OFSTED 2005, Barry and Jenkins 2007, Stark et al 2009, Burgress 2012). Improving behaviour and attendance at school has been a key priority for the UK Government since the mid-1990s (DfES 1989, DfES 2004, DfES 2005, Hallam, Rhamie and Shaw 2006, DCSF & DoH 2008, Hallam 2009, DfE 2011a, DfE 2011b, DfE 2011c). Policy guidelines and initiatives aiming to address

this broad objective have taken a systemic approach, focusing on whole-school factors, such as leadership, training, consistency of behaviour management, for example (Elton Report DfES 1989, OFSTED 2005, Hallam 2009, Hart 2010), through to more targeted intervention for those children most at risk or in need of additional support (DCSF 2008, DfE 2011).

Supporting the behavioural and social development of children is a significant part of EPs' practice (Hart 2010). However, despite the number of children reported as presenting with SEBD, only a minority receive any intervention (Scott 2008). In recent years there have been a number of accounts of the role which Educational Psychology Services (EPS) can play in applying psychologically-based knowledge and skills to support schools in promoting children's behavioural, social and emotional development, and contributing towards existing school practices in this domain (Williams and Daniels 2000, DfES 2001, Farrell et al 2006, Hart 2010, DfE 2011, DfE 2012). This paper will reflect upon the role of EPs throughout.

The aim of this paper is to determine if SST would afford an intervention of choice in addressing the needs of young children (aged 5-7 years), expressing SEBD in their primary school. To meet the aims of this paper, a review of relevant educational and psychological research was carried out to identify what is already known about SST, addressing four broad questions:

- *What are social skills and how do children develop social skills?*
- *How should social skills / the need for SST be assessed?*
- *What is SST?*

- *What evidence is there for the effectiveness of SST?*

4.2 What are social skills and how do children develop social skills?

As previously discussed, for many children, social skills are learned as part of normal development (Argyle 1967, Sheridan and Walker 1999), through interaction with others (adults and peers). Through social interaction, children have opportunities to learn the basic skills for successful functioning, e.g. cooperation, compromising, decision-making and problem-solving (Sheridan and Walker 1999), social and emotional competence (Spence 2003, Denham et al 2006, Niles et al 2008), and develop cognitive skills related to motivation and emotional processing (McInerney 2005, Burgress 2012).

A number of authors suggest that it is important to distinguish between social skills and social competence (Sheridan and Walker 1999, Cook et al 2008). Gresham (1997) also emphasises the distinction between deficits in social skill acquisition and social skill performance:

> *A child is said to possess an acquisition deficit if they do not have the particular social skills in their behavioural repertoire. Alternatively, performance deficits refer to the situation where the young person possesses the skills to behave in a socially skilled manner, yet fails to demonstrate these skills in one or more social situations*
>
> (Gresham 1997, cited in Spence 2003, p.85).

Social skills are described as behaviours which are goal-directed and need to be learnt and performed, whereas social competence represents judgements about those behaviours by others (Sheridan and Walker 1999, Cook et al 2008). Therefore, social skills can be considered as *"the building blocks of social competence"* (Trower 1995 p.57). Social skills do not occur in a vacuum; to be socially skilled a child must select and perform behaviours which are appropriate to a given context. Sheridan and Walker (1999) define this as social skillfulness, conceptualised within an *ecological-behaviour paradigm*, summarised in Figure 4.1

Sheridan and Walker (1999) suggest that to be socially skilful, children must learn two sets of skills:

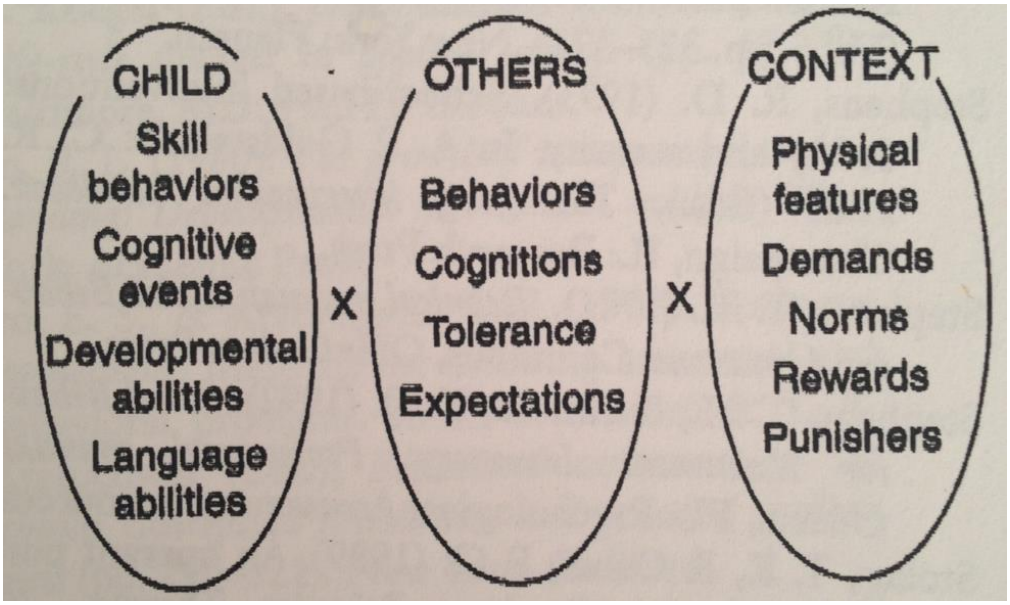
i) they need to learn a broad set of social skills, and

ii) once they have acquired and mastered these skills, they must then learn when to apply each skill, e.g. knowing how to relate to others in a socially acceptable way (Sheridan and Walker 1999).

The child needs to:

> *be aware of reciprocity in relationships and interactions, including the impact of their behaviours have on others and the ability to take the perspective of another person*
>
> (Sheridan and Walker 1999, p.687).

Figure 4.1 Conceptual schema representing social skillfulness as the interaction of three variables (child, others, and context)



(Sheridan and Walker 1999, p688)

As noted above, Sheridan and Walker (1999) argue that social skills must be defined in context and therefore consideration must be given to: intrapersonal, interpersonal skills and ecological factors:

> *central to this definition is the notion that the behaviours are goal-directed, learned, interactive, functional and context-specific*
>
> (Sheridan and Walker 1999, p.687).

Figure 4.1 illustrates that the child's cognitive skills are necessary to support their development of social skills. Sheridan and Walker (1999) suggest that the child needs to have in mind a desired outcome; therefore social skills are purposeful behaviours directed towards achieving personally meaningful goals. Children's

developmental levels and language abilities will inevitably influence how effectively they can articulate and mediate their desired goal. Sheridan and Walker's model (Figure 4.1) transcends the relatively simplistic, molecular, decontextualised behavioural approaches to 'training' social skills which characterised the early work of Argyle and colleagues, incorporating the social problem-solving orientation of Coie, Dodge and Crick (1987, 1994).

These cognitive differences are relevant to by Crick and Dodge's (1994) *social-information processing model*, which identifies several steps that children use when processing information in social situations: *i) encoding, ii) interpretation, iii) response generation, and iv) response decision*. Whilst these cognitive processes are not directly observable, it is proposed that at each stage, the child draws upon stored memories (Bushman and Peacock 2010). There is assumed overlap and interaction between stages, resulting in feedback at each stage of processing.

As previously noted, it is well-accepted that social skills are learned, most commonly through observation and imitation (Bandura 1977). Children who are not engaged in social interactions miss out on opportunities to observe and learn about appropriate behaviours and social interactions. In some cases, the behaviour to which children are exposed in their formative years are discordant with the values of norms of the wider society; in such cases, difficulties expressed by children will not reflect lack of learning, but rather having learned social practices which are not valued in the school or wider society. Additionally, children who are impulsive and/or easily distracted are likely to miss important social cues (Sheridan and Walker 1999). An additional consideration is that social skills are acquired and applied within

interactive processes, within *bidirectional, reciprocal human relationships* (Sheridan and Walker 1999). Therefore, what is considered appropriate behaviour will not only be determined by the context, but also by the how the criterion reference group perceive and judge the behaviour; this is what Sheridan and Walker (1999) refer to as *social validity*.

Finally, as indicated in Figure 4.1, and previously discussed, social skillfulness is also determined by the ability to select appropriate behaviours according to the context. Social skillfulness is therefore largely context-dependant; the child must develop a range of responses to social situations and know how to respond appropriately in a given situation. This also requires accurate reading of social and contextual cues and (selectively) generalising skills from one context to another.

The account of social skill development offered by Sheridan and Walker (1999) illustrates the complexities inherent in socially skilful performance. Whilst many children develop these skills through the course of natural development, others will require additional support to help them establish skills and behaviours which are considered to be socially acceptable across a range of settings (Sheridan and Walker 1999). Children who do not develop these skills successfully can often have difficulties demonstrating appropriate social behaviours, and may be considered to express SEBD.

Sheridan and Walker (1999) suggest that direct instruction can support the acquisition of key skills; however the child's cognitive processing capacities must also be understood and taken into account, along with other people's responses

within the ecological context. Therefore when considering any intervention aimed at enhancing a child's social skills, assessment and consideration need focus not only on the social, cognitive and communicative capacity of the child, but also the interactional dynamics with peers and adults within a complex ecological context.

4.3 Methods of assessing social skills

Aligned with an ecological-behavioural paradigm (Figure 4.1), assessment should address the child's cognitive skills, developmental abilities (including language), and behavioural presentation), the role and expectations of others, and the context in which the child is expected to express socially appropriate behaviours.

Assessment of the child's abilities, such as behavioural skills, cognitive skills-including social problem-solving, language, general development, gender, age and culture is likely to be relevant (Sheridan and Walker 1999). Assessment also needs to determine whether the child is lacking key skills (skill deficit); and/or lacks the ability to apply specific skills in a given context (performance deficit).

A range of methods is likely to be relevant here, including observations of the child within different settings, use of published inventories and tests, interviews with the child and significant adults, and observation of the child's response to intervention (Alexander 1986).

It is also important to understand the child's social skillfulness in relation to others in a given context. This is often achieved though assessing the perception of the child's

status from peers, teachers and/or parents. There are a number of sociometric methods which can be harnessed here, using peer/teacher nominations and rankings techniques (e.g. Elliott and Busse 1991; McConnell and Odom 1986, Merrell 1999).

In addition to assessing the child and others (Figure 4.1), Sheridan and Walker (1999) suggest that a functional approach to assessment is key in order:

1) to identify general and specific social difficulties which are important in a given context;
2) to gain ecological understanding which can inform decisions about effective intervention; and
3) to enable outcomes to be measured with acceptable social and ecological validity.

Assessment of this nature is often referred to as a functional behaviour assessment (FBA) (Gutkin and Reynolds 1990, Sheridan and Walker 1999, Magg 2006, Gutkin and Reynolds 2009, Bushman and Peacock 2010, Dixon et al 2012). FBA aims to understand behaviour within its context, identifying manipulable environmental stimuli (antecedents and consequences) that maintain behaviours (Sheridan and Walker 1999, Gutkin and Reynolds 2009). Functional assessment methods include observation, interviews and self report (O'Neil et al 1997, Gutkin and Reynolds 2008).

When carrying out observations as part of assessment, attention should be given to:

- *the antecedent social interactions which occur before the behaviour; and*
- *the consequential social responses to determine if the behaviour plays an functional or instrumental role in obtaining the desired outcome(s)*

(adapted from Bushman and Peacock 2010, p425).

The frequency and duration of the behaviour(s) should be recorded; this will also serve as a baseline of functioning and support an evaluation of the SST intervention.

One of the challenges with naturalist observations is that assumptions have to be made; they will not provide information about cognitive strategies and processes the child is drawing upon (Bushman and Peacock 2010), or whether the observed behaviour enhances socially consequential outcomes (e.g. enhanced friendships) (Magg 2006). Therefore, additional methods of gathering data will also be required, such as those previously discussed. Miller (2008) also raises questions about what might be considered as 'evidence' in this form off assessment, and therefore presenting a number of ethical challenges (such as *informed consent and ethical decision making Miller 2008, p.211*).

Interviews with the child, teacher and parents are also required to supplement the information gained through observations and to ensure hypotheses are socially valid (Sheridan and Walker 1999). Findings should be shared with stakeholders in order to consider if intervention is required:

1) to strengthen the skill set of the individual; and/or
2) to influence the behaviour and expectations of others; and/or
3) to adapt the social environment within which the children are expected to perform in socially skilful ways.

4.4 What is social skills training?

The majority of interventions aimed at developing children's social skills and competence are underpinned by behavioural, cognitive, and/or cognitive-behavioural approaches (Ager and Cole 1991; Olmeda and Kauffman 1993; Crick and Dodge 1994; Magg 2006; Scott 2008; Del Prette et al 2010) and/or an ecological-behavioural paradigm, which incorporates the former perspectives (Sheridan and Walker 1999).

SST is the planned and systematic teaching of targeted behaviours needed (and consciously desired by the individual) (Nyatanga 1989) for appropriate social interaction and social competence. Magg (2006) notes:

> *Social skills training is not actually an intervention but rather an outcome: improved social skills and social competence. There is no one intervention technique to train social skills*
>
> (Magg 2006, p.8).

There is no one model of SST, any SST intervention needs to reflect the complexities of social skillfulness, and therefore should be based on the individual's specific needs, others and the social context, as illustrated in Figure 4.1.

Social skills and social competency are measured by social validity (Sheridan and Walker 1999): therefore, SST needs to be situation-specific. Skills must be taught in context (Scott 2008). Moreover, in order to gain mastery in social competence, children need to develop intrapersonal and interpersonal effectiveness (Sheridan and Walker 1999, Del Prette et al 2010) and develop the ability to apply and generalise these skills in social appropriate ways.

The distinction between performance and acquisition is important for conceptualising social skills and subsequently informing intervention. Cook et al (2008) report that most of the SST interventions they reviewed had four key objectives: *i) promote skill acquisition; ii) enhance skill performance; iii) reduce competing problem behaviours; and iv) facilitate generalisation and maintenance (p.133)*. However, as noted in Section 4.1, such approaches may not give adequate consideration to the social environments in which children live, and the extent to which changes in their social behaviour will prove adaptive in family and/or community settings.

SST interventions should include training with *in vivo* practice (Scott 2008), which includes coaching, modelling, rehearsal, feedback, reinforcement, self-evaluation, and goal setting (Sheridan and Walker 1999, Magg 2006). These techniques are often incorporated into a programme in which the child receives individual (or small group) training in social cognitive problem-solving techniques, which are initially

applied to hypothetical situations, then role-played, then finally applied to real-life situations (Sheridan and Walker 1999, Scott 2008).

In 'traditional', SST using behavioural psychology, behaviour is modified through systematic and controlled application of reinforcement (typical reinforcers in school contexts include: praise, privileges, symbolic and tangible rewards) (Gutkin and Reynolds 2008). New (desirable) behaviours are promoted through immediate reinforcement, antecedent control and controlled and sequenced practice (McInerney 2005). To enhance generalisation and maintenance of new skills, distributed practice of skills is required (Haring and Eaton 1979, Solity 2012).

Scott (2008), emphasises that SST:

> *involves more than the reduction of anti-social behaviour: stopping tantrums and aggressive outbursts, while helpful, will not lead to good functioning*
>
> (Scott 2008, p.62).

Therefore, SST needs to teach appropriate behaviours whilst developing cognitive strategies, and promote the active engagement of the child in the learning process (Swearer et al 2009, Bushman and Peacock 2010) in order to learn new ways of interacting with others. Bruner (1966) argued that children should learn through active involvement; he states that the important principles of '*discovery learning'* include: i) *inspiring curiosity, ii) motivating the child to discover new learning, and iii) promoting independent problem solving skills*. Crick and Dodge's (1994) social-information processing model would also be an appropriate model to draw upon to

support children in learning new (and appropriate) strategies for understanding, interpreting and responding to social situations.

Figure 4.1 emphasises the need to consider others and the environment when aiming to enhance a child's social skillfulness; therefore, the school culture and attitudes held by school staff, parents and other children also need to be considered to strengthen the social validity of behavioural changes/improvements (Sheridan and Walker 1999, Spence 2003, Denham et al 2006, Curtis and Norgate 2007). Environmental modifications may also need significant consideration in order to ensure antecedent manipulation and other necessary ecological adjustments necessary to support skill generalisation.

In summary, there is consensus that effective SST requires the direct teaching of specific socially appropriate behaviours using a combination of behavioural and behavioural-cognitive approaches and techniques (Magg 2006) and attention to the social ecology (Sheridan and Walker 1999). Furthermore, SST should plan for rehearsal of skills in real-life contexts in order to promote social validity and reflect the complex and interactive nature of behaviour between the child, others and the social context (Sheridan and Walker 1999).

4.5 What evidence is there for the effectiveness of social skills training?

Sheridan and Walker (1999) and more recently Cook et al (2008) report that a number of studies report positive outcomes from SST, whilst others offer more equivocal support. In an attempt to appraise the empirical evidence-base for SST for

children expressing SEBD, I initially drew upon a number of published reviews of relevant studies (Sheridan and Walker 1999; Magg 2006; Scott 2008; Stark et al 2009; Swearer et al 2009; Bushman and Peacock 2010; McCabe and Altamura 2011; Cooper and Jacobs 2011), and subsequently followed up key studies referenced in these papers. These recent research studies are summarised in Table 4.1 (Webster-Stratton and Hammond 1997, Webster-Stratton 2004, Denham 2006, Curtis and Norgate 2007, Burgress 2012).

My original criteria when selecting these studies was to identify interventions which specifically focused on social skills training for early primary-aged children. I was specifically concerned to evaluated studies which had a behaviour-cognitive theoretical underpinning and which categorised social skills as either acquisition deficits or performance deficits. I hoped to critique studies in which assessment informed the intervention goals and study design and therefore matched intervention to specific needs (e.g. skill acquisition or performance deficit).

However, few studies distinguished between these deficits when assessing and designing SST interventions (Denham et al 2006). As a consequence, the five key studies summarised above were selected based upon two broad criteria:

- the age of the children (early primary); and
- that the SST intervention was underpinned by the assumption that social skills are learnt (Sheridan and Walker 1999), and therefore the SST included the direct teaching of social skills using established behavioural (and in some cases behavioural-cognitive) approaches (e.g. modelling, role-play and reinforcement).

Table 4.1: Social skills training studies

Intervention	Nature of intervention	Strategies fro teaching social skills	Key findings	Outcomes and implications for practice
Webster-Stratton and Hammond (1997) **The Dinosaur School**	Targeted: Children who already had a diagnosis of ODD/CD.*4-8 year olds* 20-22 week classroom based programme Child-based training	Performance-based approached. modelling using puppets, video-based modelling, fantasy play, observation and reinforcement.	i) Analysis of the data collected indicated that at the one-year follow-up, improvements in the children's social skills were maintained. ii) Improvements at home were particularly noticeable in the CT & PT condition, improvements at school were not as significant. ii) significant improvements in conduct problems and social problem solving skills in real life situations.	• Need to continue intervention in schools and in conjunction with school staff • Need for earlier intervention prior to children reaching diagnosis stage.
Webster-Stratton & Reid (2004) **Incredible Years Classroom Social Skill and Problem-Solving Curriculum**	Whole-school approach – Mainstream primary 2-3 per week (64 lessons) Pre-training for teachers delivering the programme	role playing, practice, games, modelling, generalise skills across different contexts (home and school)	i) reduction in aggressive behaviour and disruptive behaviour. ii) increased prosocial behaviour and positive conflict management skills. iii) positive behaviour changes maintained 1 and 2 years later. iv) adding the parent programme to the child programme, enhanced long-term outcomes across settings (home and school).	• Classroom based intervention provides more exposure to teaching of and practicing specific skills. • Targets all children. • Intervention ideally linked to parents programmes and teacher training on classroom management. • More effective when provided with high fidelity and integrity to original programme design and recommendations. • Pre-training for school staff (raise awareness, understanding further develop skills)

Intervention	Nature of intervention	Strategies for teaching social skills	Key findings	Outcomes and implications for practice
Denham et al (2006) **Social Inclusion Project**	Children who were considered by school staff to be 'at risk of exclusion'. 7-11 year olds 10 weeks small group intervention, 6 schools	Activities were lead by adult facilitator, which included: play-based activities, role play and board games. Intervention based on coaching techniques.	i) increase in positive behavioural changes in all targets areas. ii) increased social inclusion for targeted children. iii) change still evident at a 6 month follow up Possible reasons offered for why the intervention was effective, included: i) increased attention, ii) enhanced self-perception, iii) improved whole school ethos towards inclusion and staff attitudes	• Draws attention to potential 'perception' differences between child, parent and teacher when evaluating intervention (e.g. attribution). (p44) • Difficulties with generalising skills between home and school as school-based intervention. Highlights situational aspects of behaviour. (p44) • Recognise the interactions between the individual and systemic; processes and attitudes within the system may also impact upon individual change. (p45) • Unclear which processes within the group interventions led to such an improvement in social skills for the individuals involved (p46)
Curtis and Norgate (2007) **Promoting Alternative Thinking Strategies (PATHS)**	Whole-school approach, structured programme of taught lessons. Pre-training for teachers Control group to compare findings with Evaluated after one year	Teacher scripts, pictures, photographs, activity sheets, posters, home activities, and parent letters. Role play, reinforcement, modelling. Generalisation is promoted by asking the children to demonstrate their newly acquired skills in a range of school-based contexts.	i) children in the PATHS groups made significant positive changes compared to the control groups. ii) observed improvements in children's language development, empathy, emotional control, cooperation and conflict resolution. iii) reports that children were generalising the skills learnt at school into the home environment.	• Highly structured programme supported implementation at all levels of the school (teachers, TA, lunchtime staff etc)
Burgess (2012) **Habits of Mind**	Children with social and emotional difficulties (identified by parents & teachers) 7-12 years old 10 weeks small group intervention involving a class teacher Pre-training for teachers and parents	Classroom-based activities to promote generalisation of skills, homework tasks to generalise across settings.	i) increase in positive behavioural changes in all targets areas iii) children felt they had changed more significantly than the change identified by parents or teachers, v) decrease in defiant behaviours, refusing to comply, argumentative and vindictive behaviour.	• All children in the setting were exposed to the intervention. • Draws attention to potential 'perception' differences between child/parent/teacher when evaluating intervention (attribution). • Reflects upon the gender imbalance in reported behavioural problems. • Need for longitudinal studies to monitor long-term impact of the intervention. • Pre-training for school staff (raise awareness, understanding, further develop skills)

Each of the five studies is now considered in detail, with a view toward abstracting information relevant to the superordinate question addressed within the current paper: *whether social skills training would form the intervention of choice to support Key Stage One mainstream primary school children who were reportedly expressing social, emotional and/or behavioural difficulties*.

Webster-Stratton and Hammond (1997)

In a response to a critique that existing SST interventions have not produced long-term generalisation of improved social and cognitive skills across a broad range of settings (e.g. clinic, school and home), Webster-Stratton and Hammond (1997) set out to compare three models of intervention which aim to improved children's social skills. The social skills they particularly focused on included social problem solving and conflict management. The three models of intervention they evaluated were: child training (CT), parent training (PT) and a combination of both (CT & PT). They hypothesised that the combined approach (CT & PT) would be the most effective method as a wider range of risk factors would be addressed, affecting the children's social skills and the core ecological context of the home (Webster-Stratton and Hammond 1997).

The intervention was conducted within a clinic setting situated in America. Assessment and intervention were carried out by highly skilled therapists within the clinic. The participants were recruited via referrals to the clinic for children displaying challenging behaviour. Participants were randomly allocated to four conditions: i) CT; ii) PT; iii) CT & PT; and iv) a waiting list. For the purpose of this paper, I only critique the findings from the CT conditions; however the findings from the other three

conditions will be considered when drawing upon the overall conclusions from the study.

The children in CT intervention were between 4-7 years old. Assessment of the children's skills was conducted with reference to the Diagnostic and Statistical Manual Disorder third edition (DSM-III, APA 1980). Children who met the DSM-III criteria for oppositional defiant disorder (ODD) and conduct disorder (CD) were selected for the intervention. Webster-Stratton and Hammond (1997) do not explicitly state their theoretical position; however, they suggest that these deficient skills can be strengthened by direct training of social skills.

The design of the intervention was based on performance-based intervention approaches. The CT was named 'The Dinosaur School' which consisted of 22, two-hour weekly sessions. The children received direct training in specific social skills, using methods such as modelling using puppets, video-based modelling, and fantasy play. The children had opportunities to observe other children modelling appropriate skills. The children also observed other children being rewarded and praised for application of appropriate skills. In addition to modelling techniques, the children were also taught 'self-talk' strategies in situ. Rewards were used to reinforce skill performance. To enhance generalisation of skills, homework tasks were set and parents and teachers received weekly letters explaining the key concepts taught in each session. Teachers and parents were asked to reinforce the targeted skill at home and school.

Pre-post and follow-up data were collected prior to the intervention, one month after and one year after the intervention. A range of pre-post measures were used to

determine the effectiveness of the intervention, including: parental reports of the child's behaviour; independent observations (at home and in clinic); daily reports completed by parents; behaviour checklists; and an assessment of the child's social problem solving skills. Analysis of the data indicated that at the one-year follow-up, improvements in the children's social skills were maintained (Webster-Stratton and Hammond 1997). Improvements at home were, however, particularly noticeable in the CT & PT condition. Improvements at school were not as significant.

Webster-Stratton and Hammond (1997) suggest that to the limited improvement of social skills at school may have resulted from the teachers not being directly involved in the intervention. These findings provide further support for Sheridan and Walker's (1999) ecological-behavioural model (Figure 4.1), which suggests that behaviours are context-specific and therefore, children must be taught behaviours appropriate to the particular contexts in which use of the skills is expected. Despite findings that the CT condition led to significant reductions in conduct problems and improvements in social problem solving skills in real life situations, the low contact with the school context is likely to have reduced the social validity of these improved behaviour changes.

Webster-Stratton and Reid (2004)

Webster-Stratton and Reid (2004) provided a description and evaluation of a classroom-based programme aimed at increasing all children's social and emotional competence. Whilst they did not explicitly state their theoretical position, they also assumed that children's social and emotional competence can be strengthened by direct training of social skills. They defined social skills as effective skills in: social problem-solving; social communication; and anger management (note that this

intervention is builds upon Webster-Stratton and Hammond's 1997 SST targeting children diagnosed with ODD and CD). Throughout their paper they described children presenting with inadequate social and emotional competence as having skill deficits; no consideration is given to whether the children have acquired these skills.

This classroom-based intervention, designed and implemented in America was aimed at children aged 3-8 years old. Head Start Centres and Kindergarten classes in schools from low-income areas were randomly assigned to two conditions: intervention and no intervention. The numbers of settings that participated is not stated; however data are analysed for 628 children.

The intervention includes a four-day teacher training workshop focusing on classroom management strategies and information on how to deliver the Dinosaur School Curriculum (Webster-Stratton and Reid 2004). Training school staff and parents on what is considered to be socially acceptable behaviours was considered likely to enhance the social validity of the intervention as there is likely to be increased consensus from the criterion reference groups, and also affirmation of target skills within the important ecological microsystems of the classroom and home (Sheridan and Walker 1999)..

The Dinosaur Curriculum consists of 64 lessons, delivered 2-3 times a week. Each lesson consisted of 20 minutes whole-class teaching, followed by 20 minutes small group practice activities. No assessments or analysis of the children's skills were conducted prior to the intervention. The small groups were constructed based on teachers' assessment of children's temperament and developmental level.

The curriculum included activities mediated by coaching, reinforcement, live video tapes, role-playing, practical games and modelling, all of which combined cognitive, affective and behavioural components for teaching specific skills. Webster-Stratton and Reid (2004) emphasised the need for adults to seek opportunities outside of the classroom to promote specific skills, encouraging children to generalise skills across different contexts; a principle also aligned with Sheridan and Walker's ecological-behavioural model (1999).

The effectiveness of the intervention was assessed using the data from independent pre-post classroom observations. Individual testing of children's cognitive social problem solving was also carried out, although the authors do not indicate the specific assessment methods or resources used. Self-reports from teachers were also gathered to ascertain the effectiveness of the intervention.

Findings indicate that, post-intervention, children in the intervention group presented with less aggressive and disruptive behaviour and more pro-social behaviour compared to the children in the no intervention group. Positive behavioural changes were maintained for one to two years later.

The authors suggest the success of the classroom based intervention could be attributed to the frequency of direct teaching of specific skills and the value of providing the children with opportunities to develop and practise effective language and social skills in 'real-life' situations. Furthermore, they argued that classroom-based interventions are more likely to improve social skillfulness as the child is socially included and therefore provided with opportunities to observe others and select behaviours which are appropriate in a particular context: an explanation

congruent with the assumption that social skill development is a bidirectional, reciprocal process (Sheridan and Walker 1999). Webster-Stratton and Reid (2004) recommend that this programme be issued in conjunction with the parent programme and continuous classroom management training for teachers to ensure that they are consistently reinforcing the newly learnt social behaviours at home and school.

Denham et al (2006)

In contrast to Webster-Stratton and Reid's (2004) whole-class intervention, Denham et al's (2006) Social Inclusion Project was specifically aimed at those children considered by school staff to be 'at risk of exclusion'. The Social Inclusion Project was a response to criticisms that not all SST interventions are effective for all populations (Gresham et al 2001), suggesting that individual cognitive and developmental needs should be considered (Sheridan and Walker 1999): Magg (2006) notes that:

> *a particularly troubling issue has been the heterogeneity of participants who receive SST under the umbrella terms 'emotional and behavioural disorder'*
>
> (Magg 2006, p4).

The Social Inclusion Project consisted of two different school-based interventions:

i) 'peering mentoring', which focused on interpersonal problem-solving; and
ii) 'skills training', which employed coaching techniques.

Children were selected based on the judgements of their teachers. All participants were aged between 7-11 years old. The project was delivered in six UK primary schools over a two year period. 68 children participated in total. Weekly sessions lasted for 30 minutes over a 12-week period. The interventions were delivered by a Social Inclusion Worker, employed by the Local Authority and evaluations of the interventions were carried out by the Psychology Service.

The assumptions of this project were that enhancing the children's social skills would lead to improved social inclusion and improved behaviour within a targeted group of children. The 'skills training' intervention was based on coaching techniques. Session frameworks reflected the social-information processing model offered by Crick and Dodge (1994). An adult facilitated the sessions, explicitly teaching children to encode, interpret and respond to specific social situations. These skills were taught using techniques such as turn-taking, managing emotions, communication and cooperation through play-based activities, modelling and role-play.

A number of pre-post measured were used to evaluate the effectiveness of both interventions; these included a pupil, parent and teacher questionnaire, all of which were completed before the intervention and again after the intervention, although it is not stated how long after the intervention. In addition to the quantitative data collected, a number of structured interviews were conducted with some teachers and children six months after the interventions. Two schools were not included in the interviews as a number of the participants no longer attended the school.

An analysis of the data collected indicated that the teachers' perception of the children's social skills and the children's' self-perceptions had increased in both

interventions. The children selected for each intervention were slightly different in their social, emotional and behavioural needs, suggesting that the intervention aimed to match the children's cognitive, developmental and behavioural needs (Sheridan and Walker 1999); however no structured pre-assessments were carried out to determine the specific needs of individual children. The authors recognised that the design of the study did not identify which particular factors or processes in each intervention may have brought about the reported positive changes.

Parents did not report any significant changes in behaviours at home, therefore suggesting that the skills taught in the intervention were not generalised to the home. No details were provided about whether/how attempts to include or inform parents about what was being taught in each session were provided. The interventions did not include a control group; therefore improvements may have been attributed to maturation, although, this is unlikely given that the interventions were only for 12-weeks.

Denham et al (2006) suggest that in order to build upon the success of the Social Inclusion Project, the intervention strategies needed to be continued within the classroom. This is further supported by the findings from previous study studies (Webster-Stratton and Reid 2004). The findings from this project, compared to the 'Dinosaur School' intervention (Webster-Stratton and Hammond 1997) further highlight the need to include parents in any intervention aimed at bring about improvements in children's social skills across a range of contexts and contribute to generalised improvements in a child's social skilfulness (Sheridan and Walker 1999).

Curtis and Norgate (2007)

A number of studies have suggested that cognitive interventions are not as effective for younger children (Webster-Stratton and Hammond 1997), and that interventions using behavioural-cognitive approaches or those grounded in an operant learning framework are more effective for Key Stage One children (Cook et al 2008).

Curtis and Norgate (2007)'s evaluation of the Promoting Alternative Thinking Strategies (PATHS) for KS1 children was selected as an appropriate study to review as it is harnessed a number of theoretical frameworks: affective, behavioural, cognitive and dynamic models of development:

> *in which a child's behaviour and internal regulation is considered to be a function of their emotional awareness and control, their cognitive abilities, and their social abilities*
>
> (Curtis and Norgate 2007, p.34).

Furthermore, Curtis and Norgate also considered the role of environmental factors on development (Sheridan and Walker 1999), maintaining that interventions are more effective when changes within the environment are made to provide opportunities for children to use the new skills they have been taught.

The PATHS programme originated from America. Curtis and Norgate (2007) introduced the PATHS into a number of UK schools as a pilot project. Five primary schools and three control schools (total of 287 children) were involved in the 2007 report on the PATHS project evaluation. Schools were matched as far as possible in terms of age range and catchment area.

PATHS was a whole-school approach which consisted of 131 lessons in total to form a daily curriculum. The authors did not specific how long each lesson lasted for. The central focus of PATHS was the generalisation of skills into everyday life (Curtis and Norgate 2007). Techniques such as role-play, story-telling, modelling and reinforcement were used to teach specific skills. In an attempt to include parents, letters, assemblies, parent meetings and home visits were also carried out as part of the PATHS curriculum.

No assessment of individual children's social skills was conducted. Pre-post data were collected using a behavioural checklist (completed by parents and teachers). Follow up interviews were conducted with teachers in the PATHS schools.

Scores from the behavioural checklist indicated that there was a significant positive change in scores from the pre to post scores for the intervention groups, but not for the control groups. Teachers attributed the success of the PATHS project to the fact that it fitted into the school's existing culture. Interviews with teachers indicated they believed that staff's commitment to PATHS as a whole-school approach, enabled key messages to be generalised beyond the classroom curriculum.

The longer-term impact of PATHS is not yet reported. However, the findings from this initial evaluation provide further support for the need to consider wider contextual and environmental factors if SST interventions are to be effective (Sheridan and Walker 1999). These findings also provide support for SST interventions to be underpinned by both cognitive and behavioural approaches.

Burgess (2012)

Burgess's evaluation of a Habits of Mind (HOM) intervention was similar to that of Denham et al (2006) in that the underlying principles in HOM assumed that whilst skills can be learnt, factors such as motivation and emotions should also considered. Burgess (2012) described these factors as *'intelligent behaviours'*. HOM is based on humanistic philosophy, but also upon the principle that effective thinking skills can be taught to promote positive behaviours (which is why this paper was selected). The description of the HOM programme provided by Burgess (2012) also suggested elements of Crick and Dodge's (1994) social-information processing model are reflected in the theoretical orientation of the programme, where children are taught to encode and reflect upon social situations and their responses in order to develop *intelligent (social information processing) behaviours*.

Like other interventions outlined above, HOM also recognised the importance of including parents, in order to support the child to generalise skills across contexts (Webster-Stratton and Hammond 1997, Webster-Stratton and Reid 2004, Curtis and Norgate 2007).

Burgess' (2012) HOM evaluation was conducted in an Australian mainstream primary school. HOM was undertaken by all classes within the school; however data were only collected for 15 children who had been identified by school staff and parents as '*displaying challenging behaviour'*. The Conners Teacher Rating Scale (Conners 1997) was also used as an identification tool for selection. The age of the targeted children was 7-12 years. The targeted children received the same exposure to the programme that all the children in the school experienced.

The HOM intervention consisted of two full day workshops for teachers and parents. During these workshops adults were trained in the principles of HOM, taught strategies to use with the children and provided with resource packs. In order to evaluate the effectiveness of the intervention, three methods of data collection were used: a self-report child rating scale; the Conner's rating scale (completed by teachers); and semi-structured interviews with parents, teachers and the children. The semi-structured interviews were conducted at the end of the intervention.

Analysis of the pre and post data indicated that HOM had a positive impact on most of the 15 children who had previously displayed challenging behaviour. Burgess (2012) suggests that the programme was not so effective if parents did not attend the workshops. As with other studies, there was a difference in the degree to which different stakeholders rated the level of behavioural change (Denham et al 2006), further emphasising the need for planning for social validity to be strengthened (Sheridan and Walker 1999).

The validity of the data collection tools presents as a potential limitation of this evaluation, in that subjective opinions are sought, no independent observations of the children were conducted which may have strengthen the validity of the findings.

Despite these limitations, this evaluation does offer some support for using cognitive methods of intervention with children lacking social skills, and further supports Sheridan and Walker's (1999) assertions that the child's cognitive abilities and processes need to be understood and addressed. Consideration of affective factors, particularly motivation is also identified as an important consideration for intervention to be effective (McInerney 2005, Stark et al 2006, Bushman and Peacock 2010).

Critique

The purpose of reviewing these five studies was to consider whether social skills training should form the intervention of choice to support KS1 mainstream primary school children who were considered to be expressing social, emotional and/or behavioural difficulties. Of these studies reviewed (Webster-Stratton and Hammond's (1997) 'Dinosaur School' specifically targeted young children (aged 4-8 years).

Sheridan and Walker's (1999) ecological-behavioural model (Figure 4.1) emphasises the importance of assessment prior to carrying out any interventions. None of the five interventions were informed by comprehensive assessment of all salient attributes of children (their social skills, social cognitive problem-solving skills, wider aspects of their language and communications skills and developmental status relevant to both their overall social competence and their capacity to engage with the different methods of teaching social skills available to trainers). None of the studies included a detailed assessment of children's immediate social contexts nor consideration of the reciprocal influences between children and their wider social context; similarly, evaluation of the impact of SST tended also to be narrowly focused on adults' perceptions of children's performance of 'appropriate' social skills.

As noted above, while adult reports suggest SST is effective in bringing about behavioural and cognitive changes (Scott 2008), parents', teachers' (and often peers') perceptions of the child may not fully reflect behavioural change (Bushman and Peacock 2010). Several of the studies reported differences between parents', children's and school staffs' perceptions of behavioural changes (Webster-Stratton and Hammond 1997, Denham et al 2006, Burgress 2012). This may have been due to children behaving differently within different settings, reflecting a lack of skill

consolidation and/or generalisation. However, differing perspectives may also reflect reputational biases, with the social expectations of raters proving immalleable, rather than the target children's behaviour per se, therefore giving rise to potential reporting and experimenter biases. Finally, differences in rating may reflect the differential attention which different raters invest in any child's behaviour and development:

> *students and parents may also have been more focused on the target in themselves (or their child) than teachers with up to 28 other students in their class and, therefore, could be more accurate in observing changes in their behaviour*
>
> (Burgress 2012, p.60).

In short, evaluation of the impact of SST interventions needs to use a multi-method, multi-source approach to compensate for assessment error and offer a reliable indication of progress.

Encouragingly, none of the studies used only a simplistic behavioural approach to teaching: they all used multi-method approaches to intervention, targeting children's behaviour and social information processing skills, and all made some endeavour to support the maintenance and generalisation of the focus social skills. Of the studies reviewed, the CT & PT condition of the Webster-Stratton and Hammond's (1997) 'Dinosaur School' appeared not only the most effective, but also the most rigorously evaluated.

The interventions described in all of the studies were costly in terms of both adult and children's time. This is a consideration likely to be relevant for similar work being

commissioned from schools within the current financial climate and the operating conditions by which most Educational Psychology Services are bound (AEP 2011). However, in all five studies, the children who had been identified as having expressed SEBD demonstrated improved social performance following the SST interventions, even though the study design and/or reporting rendered problematic without any clear analysis of what aspects of each intervention had been effective for whom.

Overall, the five studies do offer support for the potential positive contribution of SST undertaken in school settings, to improving the social skills and contingent social inclusion for early primary aged children. A number of conclusions can be offered with regards to what works for whom, for how long, and under what conditions/techniques.

In general, age should influence choice of SST intervention methods. A number of studies have reported that SST interventions with pre-school and primary aged children have brought about positive changes in behaviour and social problem-solving (Durlak et al 1991, Webster-Stratton and Hammond 1997, Losel and Beelman 2003, Webster-Stratton and Reid 2004, Denham et al 2006, Cook et al 2006, Curtis and Norgate 2007, Burgess 2012). SST interventions grounded in social-learning principles produced more positive outcomes for older children, whilst evidence suggests that SST training for KS1 children should utilise behavioural techniques (such as coaching, modelling, observation and role-play).

In order to accommodate the developmental immaturity of children at KS1, research suggests that sessions should be more frequent (e.g. twice a week) to improve engagement and recall (Stark et al 2009).

Whilst there was a limited number of empirical studies which explored SST with pre-school and early primary school children, these five findings provide further support for early identification and intervention (Dawson and Singh-Dhesi 2010, Allen 2011).

Against this background, SST would be considered an appropriate intervention for the KS1 children presenting with social skills deficits if consideration is given to the social, cognitive and communicative capacity of a child and the interactional dynamics with peers and adults within a complex ecological context to ensure that the aims and content of the SST intervention are matched to individual need (Ayres et al 1995, Sheridan and Walker 1999, Magg 2006, Denham et al 2006, Bushman and Peacock 2010, Cooper and Jacobs 2011).

This paper previously (4.2) conceptualised social skills and social competency within a behaviour-ecological paradigm (Sheridan and Walker 1999); thus SST training alone is likely to have only moderate effects on behaviour changes (Bushman and Peacock 2010). The majority of the literature reviewed also argues that, in order for SST to be effective, it needs to be used as a part of a broader intervention strategy (Thacker 2002, Stark et al 2009, Bushman and Peacock 2010).

SST can seek to teach appropriate social skills; however, support will be required further to develop skill acquisition and application of skills in a range of contexts by providing the children with opportunities to practise these skills (Bruner 1961, 1966,

Sheridan and Walker 1999, McInerney 2005, Miller 2008, Gutkin and Reynolds 2008, Bushman and Peacock 2010, Cooper and Jacobs and Cooper 2011). Training for all key stakeholders (importantly, including parents) should be an essential part of the design of the intervention (Webster-Stratton and Reid 2004, Denham 2006, Curtis and Norgate 2007, Niles et al 2008, Burgress 2012). Such training would also establish a common framework for conceptualising and understanding social and emotional development, and for understanding *how* children learn new skills (Burgress 2012), whilst also providing an opportunity to address any situational aspects of behaviours and improve ecological and social validity (Sheridan and Walker 1999).

4.6 Conclusions

There is a wealth of literature which emphasises the importance of early intervention (Williams and Daniels 2000, Webster-Stratton et al 2006, Cook et al 2006, DoH and DfE 2008, Panayiotopoulos and Kerfoot 2007, Dawson and Singh-Dhesi 2010, DfE 2011c, Allen 2011). SST intervention should be structured (Williams and Daniels 2000) and incorporated into whole-school approaches which establish a supportive and conducive climate for social inclusion, and for teaching and developing children's social skills (Sheridan and Walker 1999, Williams and Daniels 2000, Magg 2006, Curtis and Norgate 2007, Bushman and Peacock 2010).

Small or moderate short-term changes in observable social skills are reported by a number of authors (Spence 2003, Bushman and Peacock 2010, McCabe and Altamura 2011). Longitudinal studies reviewed (e.g. Webster-Stratton and Hammond 1997; Niles et al 2008; Scott 2008) do report longer-term behavioural changes. In

order to determine which particular aspects of the SST lead to positive long-term outcomes, there is a need for further longitudinal evaluations, exploring factors which promote and maintain positive behavioural changes (Denham 2006).

SST is now widely accepted as a component of multi-method approaches to address many SEBD (Sheridan and Walker 1999, Spence 2003, Scott 2008, Stark et al 2009, Cook et al 2009, Bushman and Peacock, Cooper and Jacobs 2011). However, SST alone is unlikely to produce long-term change (Spence 2003, Webster-Stratton et al 2006, Hallam et al 2006, McCabe and Altamura 2011); therefore, promotion of affective, cognitive, social and behavioural abilities should start at a universal level and then graduate towards evidence-based targeted intervention for those whom require more specific training (Spence 2003, DCSF 2008, DfE 2011, McCabe and Altamura 2011).

In summary, this paper has presented a critique of empirical research which suggests that SST would be an effective intervention for KS1 children, if comprehensive assessments are conducted to ensure that intervention is tailored to individual needs and considers the social environment. There is evidence to suggest that due to the age of the children (KS1), SST would be most effective if grounded in behavioural-cognitive approaches and carried out at least twice per week. Finally, any school-based intervention which aims to bring about a form of behaviour change should build upon existing practices. Intervention should not replace the effective work that many schools are already doing to develop social, emotional and behavioural skills', but rather it should support the existing school culture and curriculum (DfES 2005, Curtis and Norgate 2007).

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CHAPTER FIVE

PPR4: A example of a case study which draws upon the principles of Dynamic Assessment, Feuerstein's theory of Structural Cognitive Modification and the principles of mediated learning to inform assessment and intervention.

Abstract

Currently Educational Psychology practice reflects wide variation in assessment methods and styles. Dynamic Assessment is often used as an alternative or to supplement standardised measures of ability (Bosma and Resing 2012). The paper reports upon my work as a Trainee Educational Psychologist working directly with a class teacher, parents and a pupil, drawing upon the principles of Dynamic Assessment, Feuerstein's theory of Structural Cognitive Modifiability and the principles of mediated learning, to inform assessment and intervention. The Cognitive Abilities Profile (Deutsch and Mohammed 2010) was used as a method for structuring a classroom observation and a consultation with the class teacher. The paper adds to the existing knowledge of dynamic assessment to inform intervention and classroom pedagogy. The paper demonstrates that Dynamic Assessment was a good investment of a trainee educational psychologist's and school time as it provided an opportunity for the educational psychologist, teacher, parents and the pupil to examine the process of learning and identify realistic and appropriate next steps.

5.1 Introduction

The paper arose from an interest in exploring the effectiveness of Dynamic Assessment (DA) in supporting a mainstream primary school further to develop the provision made for a pupil who was making less than expected progress in maths. The school already had comprehensive records of the learner's progress in all areas of the curriculum, informed by criterion-referenced, curriculum-based and norm-referenced assessments. The school SENCo requested additional support from an

EP in an attempt further to understand the process skills used by the learner and inform effective strategies for classroom support. The paper draws upon my work as a Trainee Educational Psychologist (TEP) working directly with a class teacher, parents and a pupil, drawing upon the principles of DA, Feuerstein's (1980) theory of Structural Cognitive Modifiability and the principles of mediated learning (Feuerstein 1980, Mentis et al 2008, Deutsch and Mohammed 2010) to inform assessment and intervention.

DA procedures are an interactive method of assessment (Yeomans 2008), which have been developed as an alternative or supplementary method of gaining a comprehensive insight into a learner's cognitive abilities and the level of intervention required to develop the child's abilities in a given domain. The principles of DA will be discussed in more detail later in the paper.

The Cognitive Abilities Profile (CAP) (Deutsch and Mohammed 2010) provided a structured framework for observing and rating cognitive functions (described in more detail in section5.3.iii.a.i). The CAP was designed as a tool for consultation and observation of these cognitive functions (Deutsch and Mohammed 2010). Information gathered using the CAP was triangulated with class teacher feedback and classroom observations.

The paper aims to add to the existing knowledge of DA methods and the usefulness of the CAP as a means for structuring and organising observation information and for structuring a consultation with the class teacher. Analysis of the CAP was used to inform intervention and pedagogy, with consideration given to implications to future Educational Psychologists' (EPs') practice.

The paper provides a brief overview of learning processes and cognitive functioning, highlighting the complexities of learning, and developing a critique of assessment paradigms within an educational context. I discuss the key principles, underlying theory and established methods of DA, with a particular focus on structural cognitive modifiability (SCM) (Feuerstein 1980, Mentis et al 2008), and on the role of the adult (or more experienced other) in this process, referred to as the mediated learning experience (MLE) (Feuerstein 1980). A detailed account of a case example will be provided. Finally, reflecting on this case example, I discuss the implications of using DA to inform intervention and classroom pedagogy, in relation to current literature on educational assessment and EP practice.

5.2 Review of the literature

5.2.i Overview of cognitive development theories

The aim of this section is to acknowledge the range of established theoretical paradigms which have influenced current understanding of cognitive development and learning. My aim is to provide a very brief overview of salient developments in this domain.

Understanding of the learning process has been informed through ongoing research in cognitive and social sciences. Learning is now generally accepted as something which we can shape, get better at, personalise, add to and think about (West-Burnham and Coates 2007). There are a number of ways of conceptualising learning which provide a ‘lens’ through which we can ‘interpret’ our observations.

Different psychological theories explain individual differences in learning potential. These differences determine the how attributes are assessed and how assessment data are used to inform intervention (Spearman 1904, Miller et al 1960, Piaget 1960, Vygotsky 1962, 1978, Stringer et al 1997, Sternberg 2004).

A review of the literature on the processes of learning and theories conceptualising cognitive development highlighted the complexities of learning, with many inter-related dimensions. Sternberg (2008) states that it is important to apply psychological theory to learning, assessment and pedagogy:

> *if the theory is sufficiently specific, it will also specify what the assessment should look like*
>
> Sternberg (2008, p.150).

In EP's practice, the process of assessment has to reflect this complexity by gathering, structuring and analysing information in order to identify the key dimensions of the reported 'concerns' (Boyle and Fisher 2007) and to determine effective intervention.

5.2.ii Overview of educational assessment

The assessment of children is a significant part of EPs' practice (Miller and Freeman 2001). EPs often work closely with school staff to support the monitoring and evaluation of children's learning and progress. EPs' practice reflects a wide variety of assessment methods and styles, with significant consideration given to how, when and what to assess. Miller and Freeman (2001), identified three main categories of

assessment commonly used by EPs: i) psychometric, ii) curriculum-related and iii) DA. Table 5.1 summarises the key principles of these methods of assessment.

Table 5.1: Methods of assessment

Assessment	Key Principles
Psychometric	Psychometric assessments are often regarded as a static or summative method of determining what a learner already knows at a single point in time. Psychometric assessments often adopt a hierarchical model of abilities.
Curriculum-based	Comparing the learner's performance within the content of their existing curriculum. Used when wishing to assess the pupil's instructional needs based on their ongoing performance on the content of the curriculum.
Dynamic	Emphasis is based on the assumption that the learner will improve with appropriate support. Emphasis is placed on the role of mediation and the processes of learning. Used when wishing to find out about the appropriateness of the strategies employed by a learner, and how they respond to intervention (mediation).

(Adapted from Boyle and Fisher, 2007, p13)

Assessment of the learner's abilities provides information on what the learner does or does not know within a given domain; this information is often norm-referenced against age-matched peers. Traditional educational assessment batteries (such as the British Ability Scales (BAS) and the Wechsler Intelligence Scale for Children (WISC)), provide a comprehensive means of assessing different aspects of a child's current intellectual functioning and/or attainment (Elliott, 1997). Such standardised assessments have been criticised for only assessing two states: *unaided success or failure*, thus presenting a very static view of ability (Fuchs et al, 2008).

Such tests tend to focus on analytical abilities (e.g. non-verbal or spatial problem-solving), placing less emphasis on creative and practical abilities (Sternberg 2008). and do not fully explore non-intellective factors which may be 'blocking' the learner from reaching their full potential. Non-intellective factors may include: concentration, motivation, efficiency and attention. In more dynamic forms of assessment,

exploration of these factors forms an integral part of the interactive assessment process in order to explore potential strategies that the learner employs to compensate for weaknesses (Sternberg 2008).

Furthermore, Vygotsky (1978) advocates a need to take into consideration other social and cultural influences on a child's learning and abilities. In EP practice, the most common method of gathering information on learning processes, cognitive functioning and academic progress is to triangulate information from several sources (e.g. information from parents, teachers, observations *and* data derived from direct assessment) in order to gain a shared understanding of the nature of the concern and inform decision making. One key to effective assessment is linking the strategy for gathering information to the questions being asked.

5.2.iii Dynamic Assessment

DA is concerned to suggest the next steps in learning in terms of improving the learner's cognitive functioning (Yeomans 2008). Rather than simply assessing the end product, the processes of learning should also be investigated (Stringer et al 1997, Yeomans 2008).

The DA website defines DA as:

> *An interactive assessment approach to conducting assessments within the domains of psychology, speech and language or education, that focuses on the ability of the learner to respond to intervention.*

(http://www.dynamicassessment.com, accessed on May 2012)

DA is not a 'package' or procedure, but rather a model and philosophy of conducting assessment. The key characteristics of DA are:

a) the assessor actively intervenes with the learner, with the shared goal of intentionally inducing changes in the learner's cognitive skills;
b) the focus is on the learner's processes of problem-solving;
c) unique information is gathered about the learner's response to intervention, which in turn informs what would be effective intervention to promote change;
d) this model is viewed as an addition to other forms of assessment, not a substitute; and
e) the underlying assumption of DA is that all learners are capable of some degree of learning (change; modifiability)

(adapted from www.dynamicassessment.com, accessed on May 2012).

Dynamic testing procedures have been developed as an alternative or to supplement standardised methods of testing (Bosma and Resing 2012), aiming to inform hypotheses re: *why* and *how* progress may be hindered. Rather than assessing one specific aspect of knowledge, dynamic testing approaches aim to identify the *abilities* which are important for learning, also referred to as meta-cognitive skills. DA is an integrated model, which considers ecological factors, is transactional by nature, with the primary focus on information processing as the principal mental activity (Haywood and Lidz 2007). DA is concerned with determining potential, and also sets out to explore the non-intellective factors, such as persistence, concentration, motivation,

efficiency, and/or attention which may be either enabling or blocking the learner from reaching their potential.

5.2.iv Structural cognitive modifiability

The theory of structural cognitive modifiability (SCM) (Feuerstein 1980, 1988) is central to the principles of DA; SCM theory views the learner as:

> *open, adaptive and amenable for change, with the aim being to modify the individual, emphasising autonomous and self-regulated change. They do not see change as an integral part of personality or cognitive input, whereas modifiability has more meaning and durability on development and performance, however requires intensive interactive intervention*
>
> (Feuerstein et al 1988).

Feuerstein (1980) distinguishes between structural changes and changes associated with maturation. He defines structural change as the learner's responses and interactions towards a number of sources of information. When change occurs he refers to this as '*cognitive change'* (Feuerstein 1980, p.9). This theory is known as SCM. The Box below illustrates the key components of SCM.

Key components of SCM

1. *Modifiability* – the ability to adapt, alter and regulate
2. *Cognitive* – the ability to think, reason and learn
3. *Structural* – organising and integrating the previous two components which makes up thinking

(adapted from Mentis et al 2008. p.3).

SCM uses an information processing model (e.g. Miller at al 1960): drawing attention to the role of cognition and memory in the learning process (Shaffer and Kip 2010). Information processing models define phases of thinking. Feuerstein suggests there are infinite cognitive functions; within dynamic methods of assessment cognitive functions are examined at three stages: i) input: gathering all of the information required; ii) elaboration: using the information that has been gathered; and iii) output: conveying the solution to the problem (Yeomans 2008, Deutsch and Mohammed 2010). Table 5.2 defines each of these stages.

Table 5.2: Three Phases of Cognitive Functioning

Phase	Description
Input	The learner gathers all of the information required, by: · using their senses to gather clear and complete information · using a system or a plan to gather the information so that they do not miss anything · labelling information so that they can remember it and talk about it · describing things in terms of where and when they occur · identifying constant features whilst other variables change · considering more than one source of information at a time · being precise and accurate when it matters
Elaboration	The learner uses the information that has been gathered and is able to: · understand and define the objective of the task · distinguish relevant information required for task completion · make a plan of the steps required to complete the task · hold information in mind whilst working with it · establish relationships and compare between pieces of information (e.g. categorise) · consider alternative explanations to complete a task/solve the problem · evaluate and adjust their performance
Output	The learner is able to convey the solution to the problem, the learner: · has the necessary language to give their answer · an ensure their answer can be understood (e.g. can put themselves in the shoes of the listener) · can think things through before responding (e.g. overcoming impulsivity) · is able to regulate and manage their emotions to overcome blocking and frustration · shows persistence and need for task completion · allows adults to intervene · responds well to help from peers

(Adapted from Mentis et al 2008, Deutsch and Mohammed, 2010)

The cognitive map (Feuerstein 1980) provides a framework for analysing, categorising and ordering cognitive functioning; it also structures the mediation strategies to address dysfunctional thinking skills (Feuerstein 1980, Blagg 1991, Mentis et al 2008). The seven dimensions of the cognitive map are described in Table 5.3.

Table 5.3: The Cognitive Map

Dimension	Description
Content	Refers to the subject matter. Some learners have difficulties because they are not familiar with the subject area and do not have the pre-requisite skills required for the task. If a learner is unfamiliar with the content this will affect their ability to engage with the task. Factors such as background, schooling, culture and past experiences should be taken into account.
Modality	Refers to the modality in which the content is presented, which may include: pictorial, verbal, graphic, numerical, figural, symbolic, tabular, or a combination of these. All learners have preferred modalities, which will influence upon their problem-solving. The modality of the content needs careful consideration in terms of considering how accessible is the material to the learner; and does the modality of the material create a barrier for the learning to access the content?.
Operation	Refers to the thinking skills the task demands. Thinking skills range for simple to complex, for example: identifying the problem, comparing, inductive reasoning, transitive thinking.
Phase	Refers to the phase in which the thinking takes place: the input, elaboration or output stage. Each phase is interconnected and the role of each phase can only be considered in relation to the other two phases. Phase is an important part of the analysis as it helps to locate the source of the ineffective problem solving strategy. Table 2.2 provided details on each of these phases.
Complexity	Tasks become more complex according to the amount of information which is involved. Complexity can also be thought of in terms of the number of units or the detail of unit of information the task comprises. Many learners can fail on a task due to its complexity, rather than its content. If the learner is not familiar with all aspects (units) of the task, the task will appear complex to them.
Level of Abstraction	Refers to the degree to which the task moves away from concrete understanding; the more hypothetical a task is, the more abstract it becomes.
Level of Efficiency	Refers to the speed and precision of the thinking process and problem solving strategies. Efficiency may be influenced by some/all of the other six dimensions. Other factors also influencing efficiency may include motivation and/or anxiety.

(Feuerstein 1980, Blagg 1991, Mentis et al 2008)

The theory of SCM emphasises the role of educators in supporting children to acquire information, skills and strategies, whilst supporting them to perceive

understand, process and remember information using their own mental capacities more effectively (Slavin 1991, Landor et al 2007).

The role of the adult (or more experienced other), is to develop the learner's thinking skills (Kozulin 1997) by creating structural changes which can then be applied to a number of problem-solving tasks. These structural changes can be achieved through an effective *mediated learning experience (MLE)*.

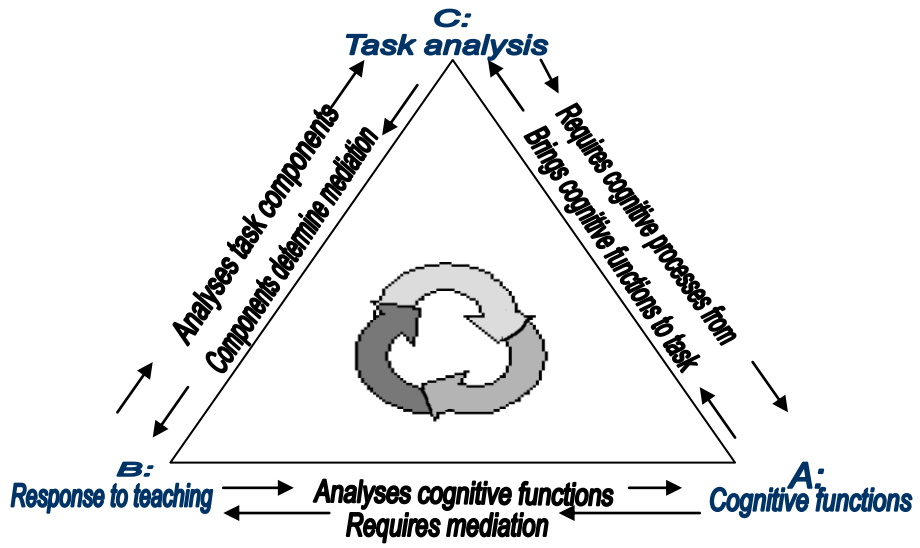
5.2.v Mediated learning experience

As noted above, Feuerstein proposed that human intellect is highly malleable and modifiable at all ages (Blagg 1991). He proposed that the modification of cognitive structures is a product of two forms of interaction between the learner and their environment: i) direct exposure to stimuli; and ii) mediated learning.

This interaction between the learner, the mediator and the task (illustrated in Figure 5.1), is what Feuerstein calls the MLE. Feuerstein originally presented this term, offering an explanation of the (frequently low) performance of children from economically and psychologically deprived backgrounds on standardised testing. He defined the term 'deprived' as meaning that these children had been denied (or deprived of) appropriate/adequate MLE, which:

> *results in a reduced propensity of the individual to organise and elaborate stimuli to facilitate their future use by means of mental processes*
>
> (Feuerstein 1980, p.15).

Figure 5.1: Tri Partite Learning Partnership Model



(Deutsch and Mohammed 2010, p10)

Stringer et al (1997) argue that the principles of MLE are grounded in Vygotskian theory and view learning as a social process, within which, the learner's cognitive skill emerges from social interactions with more competent others (Shaffer 2002). One of the aims of dynamic testing is to identify the learner's cognitive strengths and weaknesses through exploration of the nature and the extent of adult assistance required for the learner to solve cognitive-intellectual problems and educational tasks (Bosma and Resing 2012).

This method of assessment also links to Vygotsky's *Zone of Proximal Development*, which is the difference between what a child can achieve unaided in a particular situation and what can be achieved with the help of a more experienced other (Harris and Butterworth 2002):

> *cognitive development therefore cannot be seen in isolation from the instructional process that provides new forms of*

> *symbolic activity, eventually internalised as new cognitive formations*
>
> (Kozulin 1998. p80).

The role of the mediator is to intervene in the learning process by placing themselves between the learner and the stimulus, and between the learner and the response. The mediator selects, changes, amplifies and interprets both the stimuli that come to the learner, and the learner's responses to stimuli. Feuerstein (1980) argues that in the absence of good quality MLE, the development of the learner's cognitive functions and effective strategies is compromised.

The most defining characteristic of DA is the interactive and collaborative nature of the assessment and, the relationship between mediator and assessee, which is considered essential for cognitive development (Haywood 1987, Yeomans 2008). Mediation is the interactive part of assessment and instruction. These interactions between a learner and a more skilled adult (or peer) are defined as having the function of:

> *mediating the generalised meaning of the world to children: that is, they help children to understand that events, objects and persons have meaning beyond themselves, that the universe has predictable structures, that understanding that structure helps one to know what to do in a wide variety of future situations…*
>
> (Haywood 1987, p1)

DA and its mediational approaches are concerned with *how* the skills are taught to the learner, rather than *what* is actually taught (i.e. the content). Mediation alone is unlikely to produce permanent change. However, Haywood (1987) draws attention to, what he believes are important characteristics of Feuerstein's MLE (Feuerstein, Feuerstein, Falik and Rand 2002), which are described in Table 5.4.

Table 5.4: Characteristics of Effective Mediation

Characteristic	Description
Intentionality and reciprocity	A conscious attempt by the mediator to influence the behaviour of the learner, with the mediator showing a genuine interest in the activity and involvement with the learner.
Meaning	The purpose, value and the importance of the task should be shared with the learner.
Transcendence	Changes in cognitive functioning should be generalised to other tasks and contexts (past and future). Bridging questions should be used to allow the learner to understand the underpinning skills they have acquired and support them to make comparisons to other tasks. These bridges should promote visual images which help move the learner from the perceptual to the conceptual.
Feelings of competence	Manipulation of the task to facilitate mastery by the learner. This can be achieved, when appropriate, by pushing the learner to their *limits,* which can enhance a sense of achievement and competence. It is important the learner is not overwhelmed and discouraged from engaging in the task.
Regulation of behaviour	The mediator is aiming to inhibit the learner's impulses, helping the learner to 'unblock' by creating a safe and expectant environment. The aim it to overcome barriers to the task, for example: by reducing a learner's impulsivity.
Shared participation	A collaborative approach to the task which involves mutual respect and confidence.

(Developed from Feuerstein 1980, Feuerstein et al 2002, Mentis et al 2008)

It is recommended that the outcomes of DA and MLE would be followed up with a target cognitive programme:

> *however, it is not always possible to follow up DA with such a programme. This therefore, is a major challenge for practitioners of DA wishing to ensure that outcomes of assessment are reflected in subsequent intervention.*
>
> (Yeomans 2008, p.107)

Cognitive programmes, such as Feuerstein's Instrumental Enrichment (FIE) programme (Feuerstein 1980), Cognitive Acceleration through Science Education (CASE) and/or Cognitive Acceleration through Maths Education (CAME) (Shayer and Adey 2002) are often not implemented following DA for a number of reasons. Shayer and Adey (2002) suggest that such programmes require a *'paradigm shift'* with regards to the way in which methods of cognitive acceleration are viewed within the current National Curriculum framework. They argue that there is a strong emphasis on *specific content, such as numeracy and literacy* and less on the *range of cognitive experiences* (Shayer and Adey 2002, p16). Furthermore, most cognitive acceleration programmes such as those mentioned above are taught as additional lessons, separate from national curriculum subjects (Feuerstein 1980, Adey & Shayer 1994, Shayer and Adey 2002). For example, the FIE programme consists of 15 modules, each consisting of materials for a one hour teaching session. Each activity is content-free and aims to develop the processing skills required for effective thinking and problem-solving. Feuerstein (1980) recommends that pupils receive 3–5 sessions per week over a 2–3 year period, therefore requiring allocated time on the timetable and time for planning and training. Teaching and delivering cognitive programmes can be perceived as challenging for classroom teachers, who are rarely trained in such approaches (Deutsch and Mohammed 2010).

This challenge of time restrictions is further emphasised by Stringer et al (1997) and Deutsch and Reynolds (2002), who also recognise the limited time EPs have for assessment and follow up. These challenges can be further compounded by the difficulties reported by EPs in communicating findings from DA assessment back to teachers and parents (Deutsch and Reynolds 2002, Yeomans 2008).

The remainder of this paper presents a case exemplar, which illustrates the role of an adult (trainee EP) in the assessment process and MLE (Feuerstein 1979, 1980), using the principles of DA.

The CAP (discussed in detail in the following section) was employed as a means of structuring a classroom observation and consultation with the class teacher. In addition, the CAP was also used in an attempt to overcome some of the challenges noted above, particularly with regards to translating the findings into a 'curriculum-friendly' format and creating a 'common language' (Yeomans 2008).

5.3 Case example

Underpinning my rationale for the method of assessment selected was the assumption that abilities are not fixed, but modifiable through instruction (Feuerstein 1980, Blagg 1991, Sternberg and Grigorenko 2000, Deutsch and Mohammed 2010). DA and MLE were integrated to inform an appropriate method of assessment and intervention. The findings from this assessment would inform recommendations for teaching practices and guide future educational interventions needed for one pupil (Will[7]) to make progress within the educational context (specifically within maths). DA provided an interactive method of exploring Will's cognitive processes and therefore were favoured over static, standardised and norm-referenced methods of assessment.

The theoretical principles of SMC and MLE were drawn upon to inform and conceptualise the assessment methods. I selected the CAP (Deutsch and

[7] Will is a pseudonym

Mohammed 2010) as an appropriate tool for structuring the consultation process and for observing Will's cognitive functions within the classroom environment.

5.3.i Background information: Request for involvement from an Educational Psychologist

During a planning meeting with the school's SENCo and in my role as the school's TEP, a request was made for my involvement with Will, who was considered to be making less than expected progress in maths.

Initially, I consulted with the SENCo and Will's parents to identify their concerns and to negotiate my role. This consultation corresponded with the key principles identified by Wagner (2000) who defines consultation as:

> *A process in which concerns are raised and a collaborative and recursive process is initiated which combines exploration, assessment, intervention and review*
>
> *(Wagner 2000, p11).*

During the consultation stage I was able to clarify the request for involvement, ensuring that I was involved at an appropriate point which allowed for a staged approach to intervention (Kelly 2006, Yeomans 2008) and promoted the *plan, do, review* process as recommended in the Code of Practice (DfE 2001). During this phase I also had the opportunity to met Will and introduce myself. I wanted to ensure he was directly involved in decision-making to promote genuine involvement in this

process, aimed at supporting his learning (Landor et al 2007, Aston and Lambert 2010).

5.3.ii Ethical considerations

As a trainee in a professional capacity, I worked within the British Psychology Society Code of Ethics and Conduct (2009) and the Health and Social Care Professionals: Standards of Conduct, Performance and Ethics for Students (2009), both of which set out to uphold the highest standards of professionalism, and to promote ethical behaviour, attitudes and judgements on the part of psychologists.

I was aware of my own limitations and considered myself to be a learner in applying the principles of DA and MLE; therefore I sought supervision from an experienced Educational Psychologist, with a specialism in DA. The other most relevant considerations (BPS 2009) which informed the design and implementation of my practice with Will are illustrated in Table 5.5.

Table 5.5: Key Ethical Considerations

Ethical Consideration	How Considerations were Addressed
Consent	Informed consent was gained from: Parents – Letter asking for signed consent for me to work with Will. Head teacher and TA – oral consent following a detailed discussion about my role and remit. Will – oral consent following a discussion about the aims and purposes of my involvement.
Access to data	I adhered to the Local Authorities policy on case files/pupil information.
Confidentiality	Subject to the requirements of legislation, such as the Data Protection Act (1998), information obtained about a child during assessment were confidential unless otherwise agreed in advance.
Respect	Respect of the knowledge, insight, experience and expertise of all stakeholders was upheld at all times.

(BPS 2009)

5.3.iii Initial assessment of Will's cognitive functioning

5.3.iii.a Methods employed for initial information gathering

In order to gather initial information I:

- observed Will during a Maths lesson using the CAP to structure the observation;
- consulted with Will's class teacher after the observation, using the CAP to structure the consultation; and
- carried out some initial 1:1 assessment work with Will using DA approaches.

5.3.iii.a.i Cognitive Abilities Profile

The CAP assumes that 'cognitive abilities':

> *is an umbrella term which encompasses a number of cognitive processes that are considered important in organising and processing a wide range of knowledge and experiences. The model of cognitive abilities used in the CAP is one that understands cognition as a combination of mental operations, the intellective factors of thinking, together with affective factors, which are attitudinal and emotional variables. These are interdependent and transactional*
>
> (Deutsch and Mohammed 2010, p1).

The CAP was designed to bring the principles of DA into mainstream classrooms and EP practice, and provide a tool for observing and monitoring cognitive abilities in context to inform areas for intervention (Deutsch and Mohammed 2010). The CAP includes a rating scale for cognitive functions and non-intellective factors which can be used for summarising DA data, and for a consultation (Yeomans 2008). The CAP enables qualitative and quantitative information to be combined and interpreted to inform intervention.

Theoretical sources influencing the development of the CAP are outlined in Table 5.6. It considers assessment should not be 'one-off', but rather should be on-going over time, interactive and collaborative to assess cognitive functioning. The CAP is designed to reflect the dynamic nature of learning and assessment, which involves the learner, the mediator and the task (Figure 5.1, in section 5.2.v).

The CAP fundamentally aims to evaluate (or profile) the learner's cognitive strengths and difficulties. The CAP describes cognitive abilities as the *thinking skills required for effective learning to occur* (p.25). Cognitive abilities are grouped together under seven sub-sections (Table 5.6), and not in the three phases of processing (input, elaboration and output) used by Feuerstein. Deutsch and Mohammed (2010) explain that this decision was taken following a number of pilot studies which indicated that *inter-rater reliability and clarity were low when the three phased model was applied* (Deutsch and Mohammed 2010, p25).

Table 5.6: Sources influencing the structure of the CAP

Section of the CAP	Sub-sections	Theoretical Source
Section A	Attention (AA	Luria (1973), Lidz (2003)
	Perception (AP)	Feuerstein (2000)
	Memory (AM)	
	Language (AL)	
	Logical Reasoning (AR)	
	Strategic thinking/Metacognition (AS)	
	Behaviours affecting learning (AB)	Haywood & Lidz (2007)
Section B	Response to teaching and mediation	Feuerstein (2002), Lidz (2003, 2007)
Section C	Task Analysis	Feuerstein (2008)

(Deutsch and Mohammed 2010, p7)

The CAP enables the learner's response to teaching and mediation to be analysed. Abilities are rated according to a four-point scale (Table 5.7). The ratings are not standardised scores as with psychometric or normative assessments, but rather, are used to assign different levels of strength and weakness in performance, using a Likert-scale to identify priorities and lead to decisions of where and when intervention is required. Scoring is based on the professional but subjective opinions and knowledge of the person(s) completing the profile. Deutsch and Mohammed (2010) state that inter-rater reliability is promoted by use of the same scoring guide with level descriptors. On the occasions I have used the CAP in a consultative manner, agreement on the scoring and descriptions was established between all stakeholders to ensure we had a shared understanding and agreed what would constitute each rating. Challenges to the reliability of scores may arise if a change in staff occurred between the baseline scoring and the follow-up scoring. The more sources of information drawn upon (triangulation), the greater the reliability and validity of scores, therefore teachers (or other relevant school staff) are encourage to be part of the scoring process. Information which is gathered at too distant time intervals can

not be regarded as reliable; therefore, Deutsch and Mohammed (2010) recommend that the information gathering and scoring process is completed within a week.

Table 5.7: The CAP Scoring System

Score	Level of Ability
N	Not observed/not applicable
1	Unable even with support
2	Able only with support
3	Sometimes able independently
4	Consistently and independently able

(Deutsch and Mohammed 2010, p25)

I considered that the CAP enabled Will's thinking skills associated with the maths task to be measured quantitatively and qualitatively, and generate meaningful data which could be used to inform further assessment aims and in turn recommendations for effective pedagogy.

5.3.iii.a.2 Classroom observation

The aim of my observation of Will in class was to gain a better insight into his general presentation and his approaches to learning. A second aim was to consider the curriculum and pedagogy and steps taken to differentiate in order to meet Will's needs.

I adopted participant observation criteria (Wragg 1994). This type of observation allowed me to join in the classroom activities and talk to other people (staff and children), *allowing me to generate meaningful and ecological-based hypotheses*.

I used the CAP as a tool for structuring my observation. This provided a tool for observing and monitoring cognitive abilities in context, and the interactions between the learner, mediator and task (Deutsch and Mohammed 2010). It is through observation and direct assessment that these elements could be fully explored.

5.3.iii.a.3 Consultation with class teacher

Immediately after my observation, I met with Will's class teacher to: ascertain her views about Will's progress in general, further understand Will's needs, and identify effective pedagogic strategies and their outcomes. I completed the CAP with the class teacher, with a specific focus on the lesson I had observed.

The CAP assumes that assessment should not be a one-off session but rather on-going over time, focusing on underlying cognitive functions. Therefore the CAP was used as a tool to structure my discussion with Will's class teacher to further explore Will's cognitive abilities in relation to the classroom and curriculum context. I used the same CAP record booklet which I had used during my observation to triangulate information gathered from the class teacher.

The scoring of the CAP across a range of intellective and non-intellective cognitive abilities enabled the identification of Will's strengths and weaknesses, as the class teacher and I had perceived these. The discussion and scoring were conducted using a collaborative approach with the class teacher to allow her to play an active role in the process.

5.3.iii.b Summary of classroom observation and observation using the CAP

Following the classroom observation and the consultation with the class teacher (regarding the lesson I had just observed), using the CAP to record all of the information gathered (see Appendix 1), I scored each section, according to the sub-sections described in Table 5.6. Reasoning and Logic (AR) was given an '*N*' score (*not observed/applicable*) as it was felt that it was not possible to observe Will demonstrating these abilities during the sample maths lesson. It was not assumed that Will was unable to apply logic and reason to problem-solving; however, to be confident in the scoring of these skills, it was considered that direct interaction with Will would have been required to ascertain from him what logic and reasoning skills/strategies he was applying.

Table 5.8 provides an overview of Will's cognitive profile.

Table 5.8: Will's cognitive profile

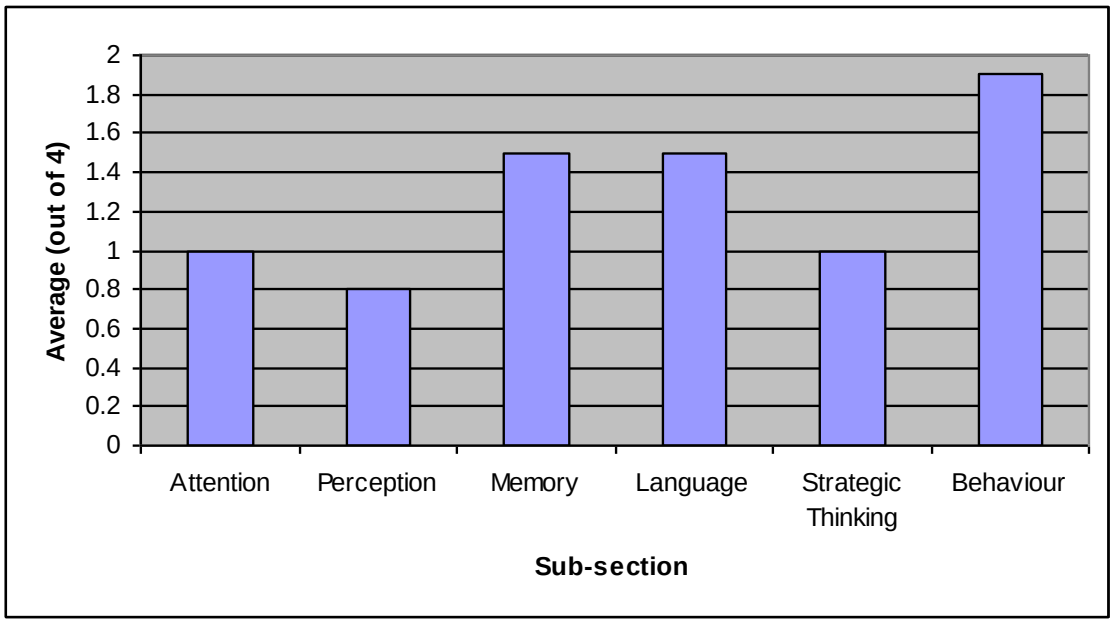


Table 5.9 provides a summary of the key findings from the

CAP

Table 5.9: Summary of findings from using the structure of the CAP (Sub-section in Section A only)

Sub-sections	Key Findings
Attention (AA)	• Will is easily distracted and finds it difficult to regulate his attention. He can be observed picking up other resources unrelated to the task. • Will requires lots of prompts and reminders (visual and verbal) from adults to shift his attention from one stimulus to another; he is unable to do this independently. • Will requires adult support and encouragement to help him sustain his attention over time.
Perception (AP)	• Will needs adult guidance (lots of verbal prompts) to ensure he gets the correct resources for a task. • Will is unable to gather more than one source of visual or auditory information at a time independently. He requires an adult to break down the task/instruction into single parts. • Will is able to copy what other children are doing but does not appear to understand why he is doing something. • Will requires adult support (both verbal and modelling) to understand and process instructions and tasks. He does not appear to have acquired internal strategies and therefore relies on adults to help him complete tasks.
Memory (AM)	• Will is able to recall visual information better than verbal if there are visual cues and prompts to support his processing and understanding. • Will is able to recall immediate information if it is supported with visual cues and reminders to prompt his memory. • With prompts (verbal and visual), Will is also able to remember previous learning or strategies he has been taught. Will had difficulty generalising his learning from one context to another. Will appears to learn information in 'singular' 'isolated' chunks, rather than building upon existing learning.
Language (AL)	• Will can be very impulsive which may be impacting on his ability to process language. However, when instructions are broken down into small chunks Will was able to understand the task. • Visual cues and verbal prompts (often single word prompts) support Will's expressive and receptive language. He requires adult support to repeat information.
Strategic thinking (AS)	• Will requires information to be presented in simple and familiar language, using single instructions. • Will does not appear to understand the purpose of the tasks and therefore appears to approach the task with little intent or purpose (other than to please the adult/teacher). • Will is unable to distinguish what is relevant to the task and could be observed using the resources for other purposes, unrelated to the task (e.g. building a tower with the counting blocks). • Will appears to be motivated by simply completing the task, therefore he does not plan the stages of the problem-solving, nor does he use trial and error strategies or evaluate his work appropriately (e.g. he will mark his answers correct without checking the answers are actually correct).
Behaviours affecting learning (AB)	• Will presents as being very open to mediation and adult intervention. He is very willing to accept help from adults or his peers. • If Will perceives a task to be too difficult he will use avoidance techniques (e.g. finding something else to do in the classroom, distract the teacher with a different conversation) to avoid the task. • Will requires the adult to motivate him; he is unable to do this independently. When the teacher walks away, Will stops working.

The sectioned scored using the CAP indicated the following areas were relative strengths of Will's:

- *behaviours affecting learning (AB)* - in particular his openness to intervention from adults and peers, his ability to control and regulate his frustrations when presented with challenges;
- *Memory (AM)* - particularly his ability to recall immediate information and recall visual information; and
- *Language (AL)* - expressive language, augmented by non-verbal communication, Will was able to illustrate his responses, for example through visual signs and symbols.

The scores from the CAP indicated the following areas were areas of particular difficulty for Will, despite adult support and mediation:

- *strategic thinking (AS)* - particularly in understanding and identifying relevant factors of the task and in determining the level of accuracy required for the task;
- *perception (AP)* - particular difficulties in considering more than one source of information at a time and in effectively gathering and processing visual, auditory and kinaesthetic information; and
- *attention (AA)* - particular difficulties observed and filtering out other distraction, retaining attention and shifting attention from one stimulus to another.

5.3.iii.c Direct work with Will using DA approaches

The concerns highlighted by school staff and parents (progress in maths) were investigated using DA to analyse the strategies and cognitive skills used by Will when problem-solving. My initial assessment method examined how Will learns. Whilst DA approach complements standardised and formal assessment data already gathered by school staff, the interactive nature of the assessment distinguishes it from other forms of assessment (Yeomans 2008). DA also allowed me to interact with Will, enabling me to make suggestions for successful completion on the task and therefore suggest next steps in learning. The primary questions explored in this initial assessment were:

- *what thinking processes are working adequately and which are deficient;*
- *what kind/amount of mediation is needed in order for Will to perform at a higher level? And what is his response?;*
- *what emotional or behavioural aspects of Will's response affect learning (e.g. non-intellective factors); and*
- *what is Will's capacity for change, in terms of learning new cognitive strategies.*

Two Dynamic Assessment tests were used:

- The Complex Figure Drawing (Rey 1959)
- Organisation of Dots (Rey 1959)

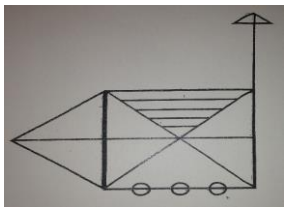
5.3.iii.c.1 Summary of the Complex Figure Drawing

In this test, Will was presented with a geometric figure, which was copied and then reproduced from memory. This test was selected as it gave insight into cognitive functions such as: precision and accuracy, comparative behaviour, systematic behaviour, labelling and non-intellective factors such as impulsivity, persistence and flexibility.

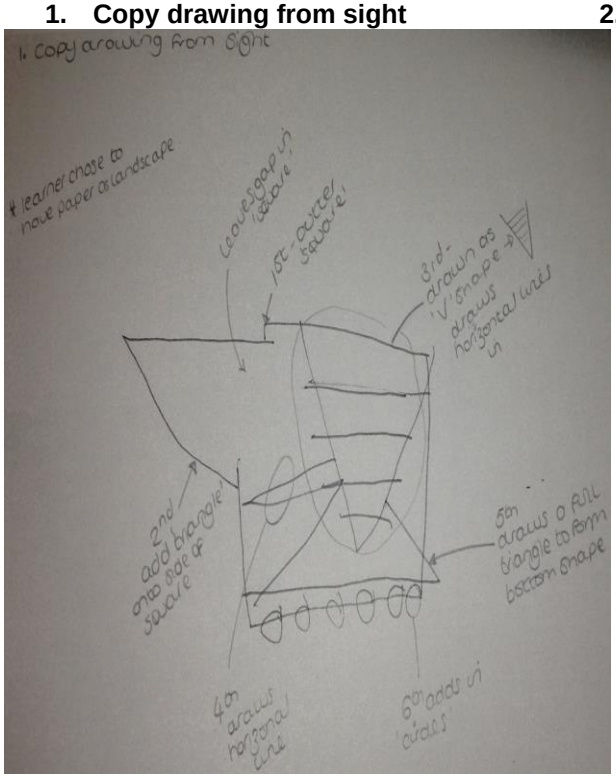
During the reproductions and memory phases, Will took a 'part to whole' approach (lack of integration) and worked in a quite unsystematic manner. His drawings showed little precision, accuracy or evaluation. Figure 5.2 provides a visual representation of Will's diagrams (Appendix 2 provides a more detailed analysis of this assessment).

Mediation was given verbally and visually, initially focusing on identifying the main features of the figure, including labelling the shapes and their orientation. With mediation, (drawing 3 in Figure 5.2) Will was encouraged to slow down and look at the figure in detail, which required me to cover up parts of the figure, to support him in being able to identify individual features of the figure. Will required lots of verbal prompts, such as *"what shape is next to what you have just drawn? how many lines are there?, how many circles are there?"* When Will took his time, precision and accuracy were improved.

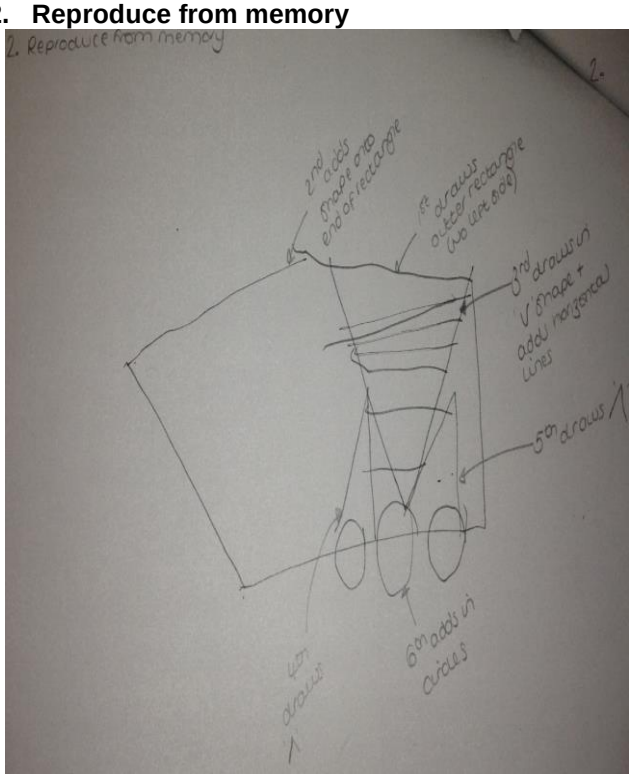
Figure 5.2: Will's Complex Figure Drawings



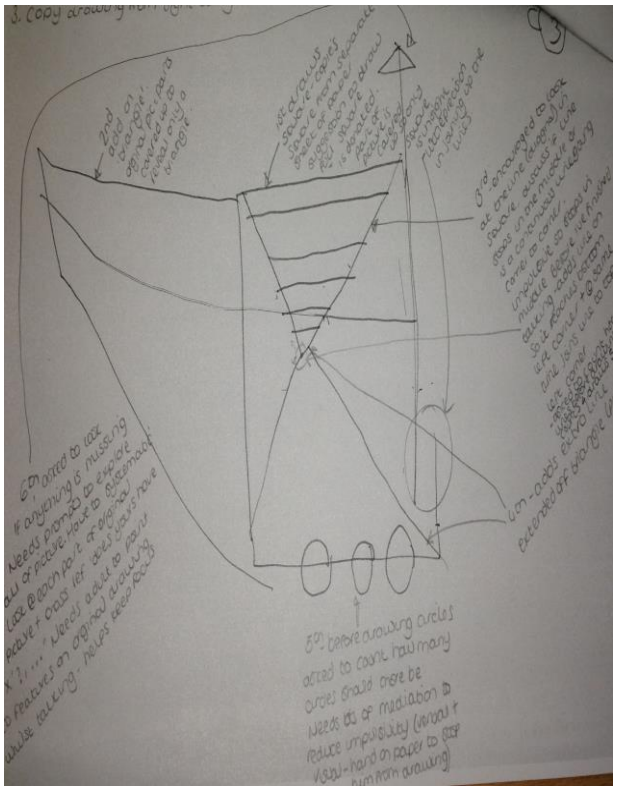
1. Copy drawing from sight



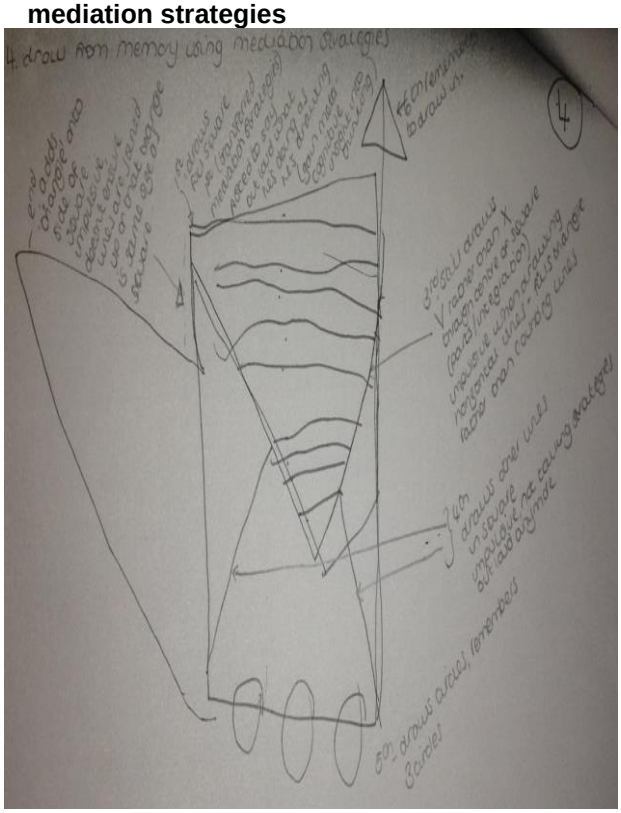
2. Reproduce from memory



3. Copied from sight using mediation



4. Reproduced from memory applying mediation strategies



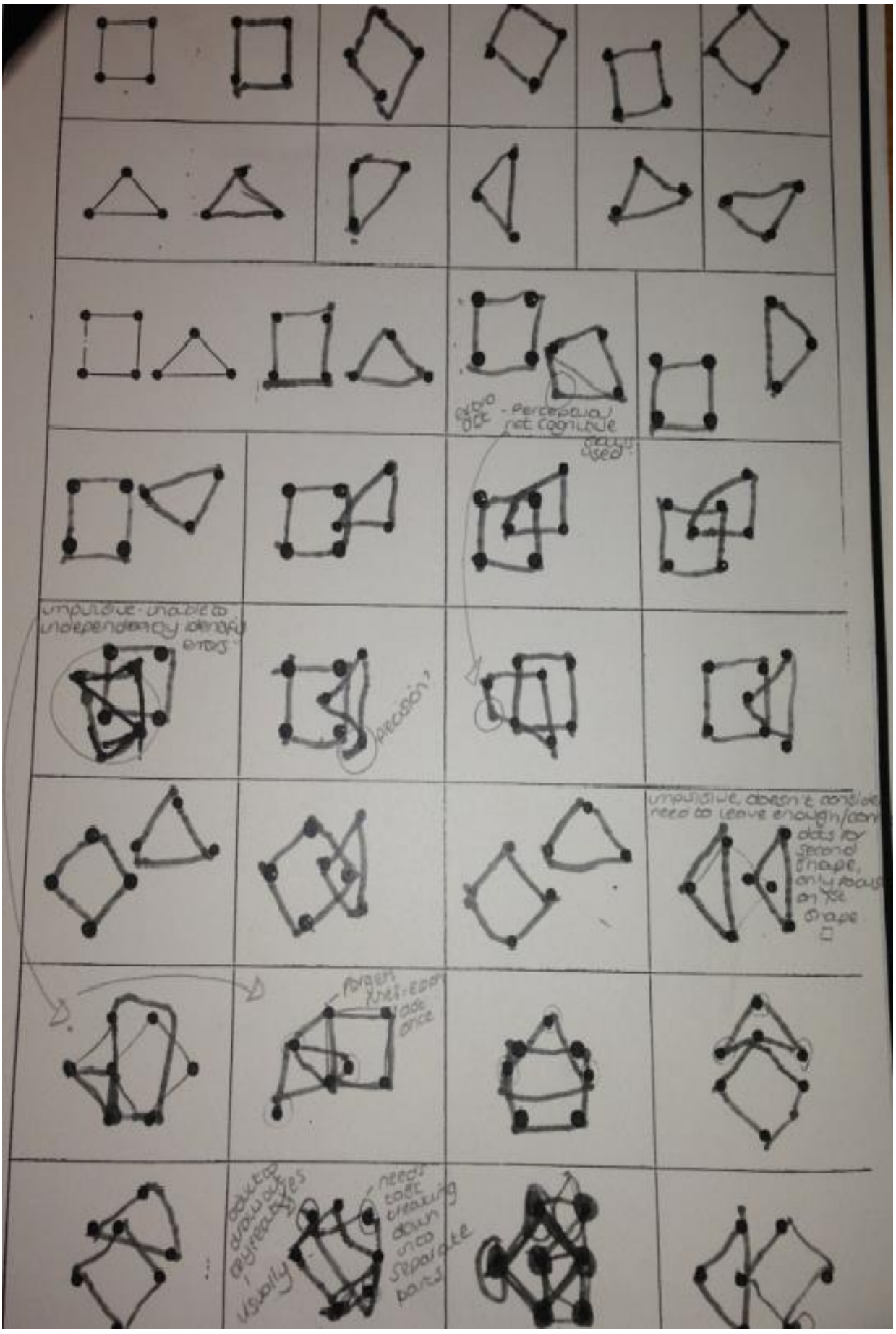
5.3.iii.c.2 Summary of Organisation of Dots

In this test, Will was presented with a page divided into two parts. In each part there is a frame with one or two model figures, followed by a number of frames each of which contains an amorphous cloud of dots. The task is to organise the dots in each frame into the model figures by projecting the required relationships and drawing lines to connect the dots. Since the number of dots in each frame corresponds exactly to the number needed for the sides or angles of the model figures, each dot is used only once.

This task was selected to explore Will's perception of standard figures, definition of their characteristics and interiorisation of figures. I also wanted to explore Will's planning behaviours, systematic search strategies (e.g. counting the number of dots required for each standard figure) and hypothetical and logical thinking. This test also allowed me to explore Will's skills in conservation of form and size of figures over changes in spatial orientation. This test relies on cognitive skills to seek the figure.

When completing this task, Will relied on immediate perceptual strategies as opposed to more sophisticated cognitive analysis, and at times he drew in extra dots to recreate the figure (see Figure 5.3). Once again, Will approached the task impulsively and demonstrated few planning behaviours prior to completing the task; this resulted in him making a number of errors as the task became more complex. When the figures were integrated, I covered up the dots to enable Will to identify one figure at a time. Will also found it difficult to conserve size and form of the shapes when they changed in spatial orientation, he therefore requiring me to rotate the page. Will did not apply trial and error strategies, nor did he generalise effective strategies from one

Figure 5.3 Organisation of Dots worksheet



frame to another, needing me to remind him, using verbal prompts and modelling (visual illustration/examples). Will's completed record form can be seen in Figure 5.3 (Appendix 3 provides a more detailed analysis of this assessment).

5.3.iii.d Initial identified cognitive strengths and needs

Interpretation of the CAP scores and utilising information which I had gathered using the above DA test, indicated that Will appeared to have difficulties in attending to and assimilating the data (input) which consequently impacted on successful competition of the task (output). Will approached the tasks impulsively, without making a plan, nor did he systematically gather information, which resulted in errors. Will required adult mediation (both verbal and visual) to encourage him to slow down and look carefully at each aspect of the task step by step. Will was motivated to complete tasks, but satisfaction appeared to be sought in showing an adult a '*finished*' piece of work, rather than a '*correct*' piece of work, which impacted upon the degree of accuracy and precision that Will afforded to each task.

Will had difficulties perceiving more than more source of information at a time. He required adult support to break down the task into smaller parts (e.g. reduce visual or verbal stimuli/input), which then enabled him to view individual aspects of the task. Will also found it difficult independently to filter out distractions and appeared to have difficulties transferring information into his short-term memory. This appeared to impact upon accurate recall. Will therefore, required an adult to provide a high level of verbal repetition and modelling to enhance his assimilation, recall and engagement.

Based on the findings from this initial assessment, it was agreed that I would carry out some further 1:1 assessment with Will in order further to explore:

- Will's general approaches to learning and problem-solving (with a particular focus on Will's planning behaviours);
- Will's memory and recall (particularly his working memory skills); and
- Will's attention and concentration skills (focusing on reducing impulsivity, accuracy and motivation).

5.3.iii.e Further assessment

The second phase of my assessment comprised three consecutive weeks of further 1:1 DA (each session one hour in length) in order further to explore types of mediation and approach Will could respond to in order further to develop key cognitive functions required for effective learning.

This targeted assessment was grounded in the principles of SCM and MLE, which aimed to:

> *increase the capacity of the human organism to become modified through direct exposure to stimuli and experiences provided by the encounters with life events and with formal and informal learning opportunities.*
>
> (Feuerstein 1980, p.115).

The goal of the assessment was to modify Will's dysfunctional thinking skills and provide him with some alternative strategies for problem-solving. Additional aims

were to develop intrinsic motivation and to develop the skills to self-evaluate accurately. During this phase of assessment, I emphasised to Will that the development of, and engagement in learning and problem-solving required meaningful and purposeful investment on his part (Landor et al 2007).

The hypotheses I generated from the initial data gathering suggest there were a number of non-intellective factors affecting Will's engagement with task completion, particularly his perception of the task and expectation of failure. From my observation and consultation with key stakeholders I hypothesised that Will had become over-dependant on the TA, and as a result was reluctant to approach tasks independently. Furthermore, Will's attitude towards his perceived abilities appeared to be compromising his readiness to acquire and master new cognitive skills.

The material I selected for each session is outlined in Table 5.10, where a description of each instrument and the rationale for its selection is also provided. I used the same tests used in my initial assessment (5.3.iii.c). There was a risk of *'practice effects'* or even boredom by electing to use these same tests. However, during my initial assessment, these tests had appeared to interest Will and allowed me to carry out an extensive assessment of problem-solving skills, including his ability to generalise. I wanted to identify what mediational strategies were effective in helping Will to generalise problem-solving strategies from one task to ; rather it was to teach Will general strategies to facilitate SCM with an aim to enhance his cognitive processing and problem-solving skills. I selected materials which targeted Will's specific needs (systematic thinking/planning, attention, perception, motivation).

Table 5.10: Further assessment using the principles of DA and MLE.

Instrument	Description	Rationale for selection
Complex Figure Drawing (Rey, 1959 & Osterrieth, 1945).	The learner is presented with the complex geometric figure and asked to reproduce it in four stages: a) copying b) from memory after a latency period c) copying with mediation d) from memory after a latency period Modality: Figural Level of complexity: Low to medium Degree of abstraction: Low, since nature of task is reproductive.	This instrument was selected to further explore and develop the following cognitive functions: • Precision and accuracy • Comparative behaviour • Systematic behaviour • Labelling shapes Non-intellective factors: • Impulsivity • Persistence • Motivation • flexibility
Organisation of Dots (Feuerstein et al, 2002)	Test consists of a page divided into three parts. In each part there is a frame with two or three model figures, followed by a number of frames each of which contains an amorphous cloud of dots. The task is to organise the dots in each frame into the model figures by projecting the required relationships and drawing lines to connect the dots. Since the number of dots in each frame corresponds exactly to the number needed for the sides or angles of the model figures, each dot is used only once. Modality: Figural, non-verbal Level of complexity: Low to medium Degree of abstraction: Low, since nature of task is reproductive.	This instrument was selected to further explore and develop the following cognitive functions: • Precision and accuracy • Interiorisation of figures • Comparative behaviour • Conservation of form and size (spatial orientation) • Attention to more than one source of information (size and figure) • Hypothetical thinking and reasoning • Systematic searching • Non-intellective factors – impulsivity, persistence, motivation, flexibility
Bridging the curriculum : Addition	Will was required to make a step by step plan of how to complete a simple addition equation	This task was selected to further explore and develop the following cognitive functions related to a specific task: • Accuracy • Internalisation of rules • Systematic behaviour Non-intellectual factors: • impulsivity • persistence • motivation

(Feuerstein 1980, Blagg 1991)

The MLE was intended to develop Will's cognitive processing skills in terms of how he gathered information, elaborated upon this information and how he generated new information. This targeted assessment also aimed to identify key characteristics of effective mediation which could be bridged into supporting Will's learning of other

areas of the curriculum beyond maths, and into the class teacher's pedagogic approach to Will.

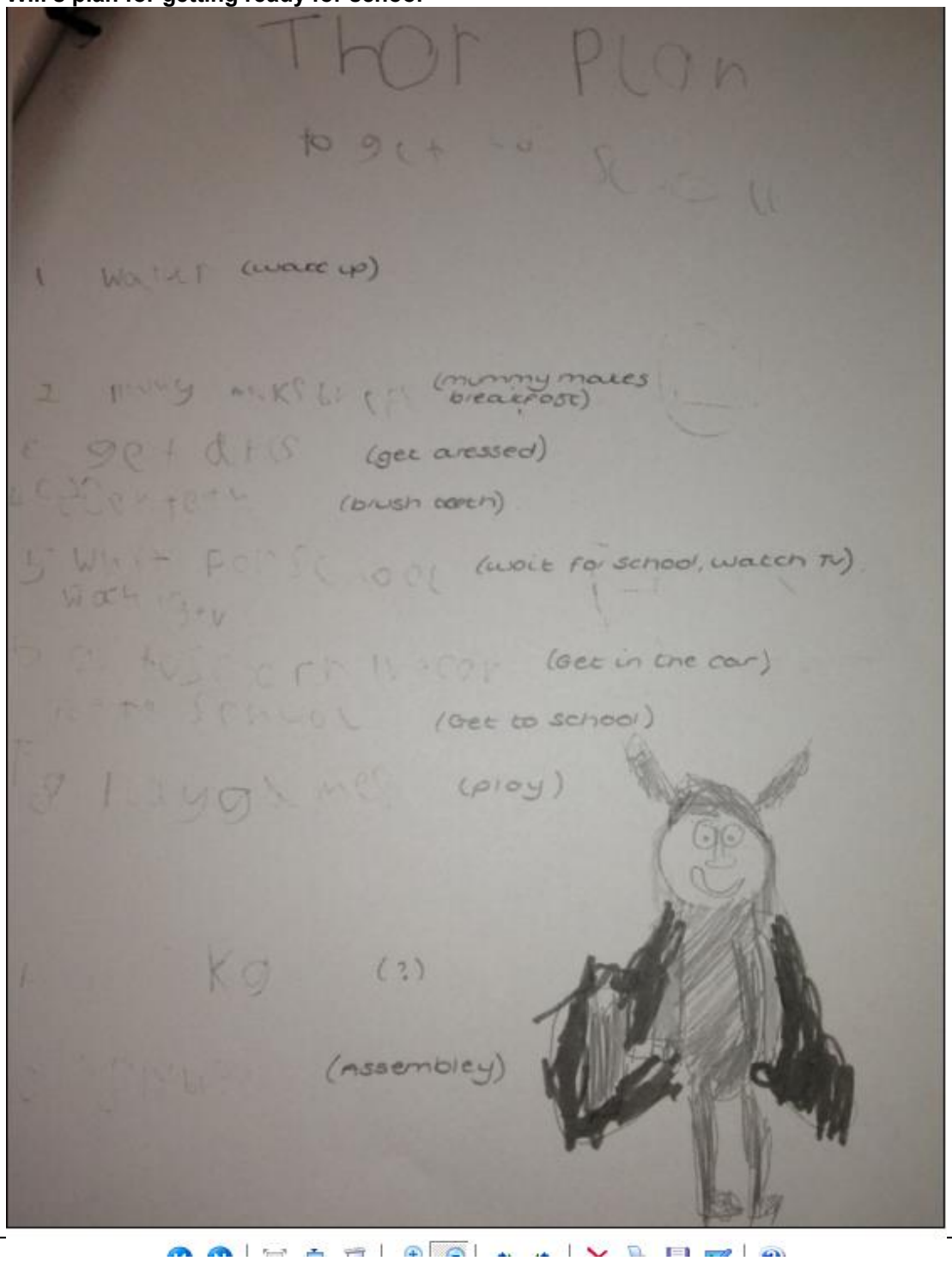
My previous assessment with Will indicated that his impulsivity and unsystematic approach to tasks prevented him from gathering relevant information and rendered him prey to careless errors. Therefore, before continuing with any further DA, I spend the first part of Session One exploring the term '*planning*'; I asked Will questions such as:

- *What is a plan?*
- *Why do people make plans?*
- *When do you make a plan?*
- *Share an example of when you do something in a planned manner/routine*?

Following this discussion, I asked Will to talk me through the stages he goes through when getting ready for school. To do so he required many verbal prompts, such as "*what next? What did you do after …?".* Will then created a plan for an alien to give him instructions on how to get ready for school in the morning. Will's plan can be seen in the Box below.

Will then required adult mediation to help him recall each stage of the plan, he was able to describe getting ready in the morning, but required an adult to offer verbal prompts to support his recall after each time he recorded the stage on paper. This suggested Will was finding it difficult to hold information in his head (working memory) whilst recording his ideas. After Will had completed the plan, he was able to tell me, more fluently all of the stages involved in getting ready for school. He used the plan and the pictures he had drawn next to each stage to support his recall.

Will's plan for getting ready for school



The session plan and outcomes for this three week period of further assessment can be seen in Table 5.11.

Table 5.11: Further assessment: session overviews and outcomes

	Instrument/Task	Mediation Approaches used	Will's Response to Mediation	Further exploration
1	*Complex Figure Drawing (Rey, 1959 & Osterrieth, 1945).*	1) Checking understanding of individual shapes (labelling) 2) Teaching the rules 3) Sequencing (making a plan to order the task). (See Appendix 4 for the plan). 4) Verbal – questioning, feedback, alternative suggestions. Encouragement to keep him focused 5) Motor – drawing examples of individual shapes	1) Able to label all shapes independently 2) Impulsive to start drawing therefore unable to attend to all the instructions (especially the need for precision and accuracy) 3) Whole to part approach. Less concerned with the accuracy of the smaller shapes within the main square 4) Initially not able to take on board alternative suggestions (fixated on finishing the task rather than doing it correctly). After lots of repetition tried alternative ideas. Found it difficult to explain how he had done something – language had to be structured for him 5) Able to copy examples drawn for him, needed lots of verbal mediation to slow him do and focus on the key features of the shapes **Level of Overall Mediation – 4** *(see Appendix 6 for levels of mediation)*	• Precision and accuracy • Comparative behaviour – evaluating own work • Systematic behaviour – planning • Expressive language • Non-intellectual factors – impulsivity, persistence, motivation, flexibility
2	Organisation of Dots (Feuerstein et al, 2002)	1) Checking understanding of the shapes (labelling) 2) Teaching the rules 3) Sequencing (making a plan to order the task). This needed constant repetition. (See Appendix 5 for the plan). 4) Verbal – questioning, feedback, alternative suggestions. Framed as challenging. 5) Motor – demonstration (modelling), hand over hand initially	1) Able to name the shapes and identify key features. independently 2) Impulsive to start drawing therefore made errors (e.g. missing out dots, using a dot more than once) 3) Did not make a plan to start which resulted in errors. After lots of mediation and repetition was able to approach the task systematically 4) Initially not able to take on board alternative suggestions (fixated on finishing the task rather than doing it correctly). After lots of repetition tried alternative ideas. Found it difficult to explain how he had done something – language had to be structured for him 5) Able to apply hand over hand techniques (e.g. moving the paper, covering up some dots) **Level of Overall Mediation – 5** *(see Appendix 6 for levels of mediation)*	• Precision and accuracy • Comparative behaviour – evaluating own work • Systematic behaviour – planning • Develop trial and error strategies • Non-intellectual factors – impulsivity, persistence, and motivation

	Instrument/Task	Mediation Approaches used	Will's Response to Mediation	Further exploration
3	Addition • Accuracy • Internalisation of rules • Systematic behaviour • Non-intellectual factors – impulsivity, persistence, motivation	1) Checking understanding of the aim of the task 2) Teaching the rules 3) Sequencing (making a plan). This needed constant repetition. (See Appendix 6 for the plan) 4) Verbal – questioning, feedback, alternative suggestions 5) Motor – demonstration (modelling),	1) Needed lots of repetition and examples from previous plans we had made 2) Needed lots of repetition and checking, by asking him to repeat back. Purpose had to be made very explicit 3) Did not want to make the plan, found it difficult to see the purpose 4) Verbal mediation alone was not sufficient, needed additional props: camera to take pictures of each stage. Will was unable to verbally describe the steps required to complete the task 5) When addition props were introduced and modelled he was very quickly able to make his own plan and implement the correct stages. (Will's plan can be seen in Appendix X) **Level of Overall Mediation – 7** *(see Appendix 6 for levels of mediation)*	• Precision and accuracy • Continue to develop his systematic behaviour – planning • Continue to develop Will's confidence in applying trial and error strategies. Emphasis on process not end product • Continue to reinforce the need for pace and not needing to rush the task

5.3.iii.f Findings and recommendations

In order to assess which strategies Will could apply in the classroom (Adey and Shayer 1994), a follow-up observation was carried out using the CAP. This observation followed the same format as the initial gathering information stage (Section 5.3.iii.a) and was also an observation of a maths lesson to ensure contextual comparisons could be made.

Will demonstrated that he was starting to develop and apply some of the strategies that had been introduced through mediation. He showed evidence of development of skills in all areas of cognitive functioning that had been previously reviewed and profiled (Table 5.9). Particular improvements could be observed in recall and strategic thinking.

Will was using previous knowledge, which had either been taught in the classroom or during the 1:1 sessions to solve maths problems (addition). Much of this was also being done independently by using the material available to him (e.g. a number line and the plan he created in Session 3, see Appendix 6). Will also demonstrated that he had the ability to apply alternative strategies to solve the problem. It was also evident that Will was starting to approach his work in a systematic manner: planning the steps involved to solve the problem.

Whilst Will could be observed applying some of the strategies introduced during the three week assessment and mediation period, he still required an adult to ensure he fully understood the task objective before starting a task, and he needed to be

encouraged to pay attention to detail, establish habits of systematic examination of data and, check for accuracy.

Based on my assessment, I recommended that Will should be provided with continued support, to further develop his cognitive skills in relation to: identifying spatial relationships, inferential and analogical reasoning, developing his working memory skills, and developing his metacognitive insight to self-evaluate.

I suggested that Will may also benefit from additional support to overcome some of the non-intellective factors which continued to impact upon his problem-solving and learning (observed during the three week assessment and mediation period and during the second classroom observation). These non-intellective factors included:

- emotional resistance to task, e.g. possible fear of failure;
- a lack of internalised strategies to complete the task; and
- limited capacity to filter out distractions.

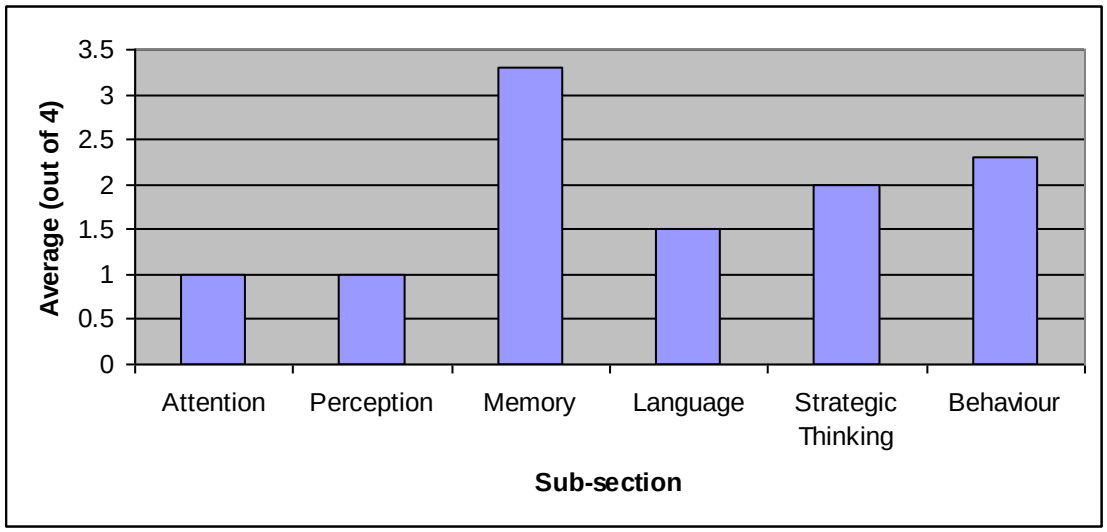
The post-observation was carried out immediately after the three week intervention period; therefore long-term changes were yet to be identified. Will appeared to be much more engaged in his own learning, presenting as more independent, concentrating on the task in hand, understanding the task and being more organised in his approach in general. Table 5.12 provides an overview of Will's cognitive profile after the three week assessment and mediation period. The information in Table 5.12 is based on the follow-up classroom observation using the CAP to structure the observation (a completed summary record of the pre and post-observation can be seen in Appendix 1).

One of the aims of this assessment was to identify Will's educational needs through exploration of the nature and the extent of adult assistance required using DA methods. The findings from my assessment and mediation were shared with Will, his class teacher, the TA and parents. We agreed upon pedagogic strategies and revised targets for Will's IEP. It was agreed that these targets would be reviewed in accordance with the Code of Practice (DfE, 2001). The class teacher and TA reported to me that they had found this method of assessment useful as it provided them with information about the type of prompts and mediation Will required and it had focused on his learning potential rather than deficit (claims also supported in Bosma and Resing's study 2012). Research also suggests that:

> *feeding back the results of DA to the child leads to perceptions of positive change from children and teachers*
>
> (Landor et al 2007, p.353).

During this assessment process, Will was included in many of the discussions with parents and teachers, he often took a role in feeding back to them what he had learnt. Will was also provided with written feedback from me at each stage of assessment (see Appendix 8 for an example of this feedback).

Table 5.12: Will's cognitive profile following further assessment and mediation



5.4 Discussion

The aim of this paper was to explore the effectiveness of DA in supporting school staff (teacher and TA) to provide effective support for a pupil who was making less than expected progress in maths. The CAP was used as a tool for structuring and reflecting upon the cognitive functions of the learner. Analysis of the information gathered would inform hypotheses about the child's profile of cognitive functions which in turn would inform intervention and pedagogic strategies.

Through consultation with school staff it was agreed that the purpose of my involvement was to explore the cognitive processes of a learner by engaging in a collaborative assessment process with the learner. All stakeholders subscribed to the view that the learner was capable of cognitive change and therefore intervention and assessment which explored how the learner learns rather than what he already knew would prove fruitful in determining how best to meet his needs. The assessment explored the learner's cognitive functions and non-intellective factors impacting on

his progress. This piece assessment complemented, rather than challenged information already gathered regarding the learner's current academic abilities.

This casework illustrated the interactive process between i) the learner, ii) the adult and iii) the task (a 'tripartite learning partnership', Deutsch and Mohammed 2010). Throughout this assessment process the learner was considered to be at the heart of the process; he was encouraged to take an active role in problem-solving and self-reflection (Landor et al 2007). The mediation approaches were targeted specifically at the learner's observable needs based on assessment information. On reflection I considered a particular strength of the MLE was that an individualised approach was adopted consistently, and communication was pitched at an appropriate level.

5.4.i Fitness for purpose

As the assessment process was flexible in its approach, I was able to gain information about abilities and cognitive skills the learner applied to solve problems. Furthermore, due to the subjective and interactive nature of the assessment and through the application of the mediation criteria (described in Table 5.4), non-intellective factors could be investigated further in order to seek personalised and effective approaches to develop effective strategies. These strategies could then be modelled to the classroom teacher and TA.

DA method of assessment explored the *processes* involved in learning and non-intellective factors, enabling any '*barriers to learning*' (Deutsch and Reynolds 2000) to be identified. Findings from this method of assessment provided the teacher and

TA with effective strategies and information on *how* to teach the learner, rather than *what* to teach him.

The CAP provided a framework for recording observations and observed progress in a structured manner. School staff sought to understand the learner's cognitive functioning and the processes of his learning. Therefore, it was considered appropriate to conduct assessment over a period of time, enabling further exploration of the learner's potential, rather than providing static information, based on an assessment at a single point in time. The CAP also provided a structure for profiling observable changes in the learner's performance in one domain (Maths) (Deutsch and Mohammed 2010).

There is no evidence that DA should replace all other forms of assessment (Deutsch and Reynolds 2000), therefore, as previously mentioned, the findings using DA in this study aimed complemented assessment data already provided by and available to the class teacher, resulting in an holistic, collaborative assessment of the learner's needs, drawing upon all sources of information to triangulate findings and resources. An alternative method of assessment, such as standardised or 'closed' tests may have promoted the expert model and isolated key stakeholder (teacher, parents and learner) in the assessment and intervention process. I also considered this method of assessment as inclusive, and avoiding a 'deficit' model (Deutsch and Reynolds, 2000) as it does not allow the learner to reach a failure point, as is the case with many standardised assessments.

5.4.ii Limitations

A challenge with dynamic methods of assessments can be the demand on time (Deutsch and Reynolds 2000, Yeomans 2008). However with good organisation and preparation, this case offers a differing perspective: illustrating that theory can make a difference in the classroom, with the findings from the DA assessment and CAP summary translated into classroom pedagogic strategies.

A review of relevant literature into EP's practice and the use of DA indicated that a number of EPs did not use DA methods as much as they wished due limited training in the field and lack of confidence to practice, interpret materials or report findings (Deutsch and Mohammed 2000). As a TEP, I considered myself a learner in applying the principles of DA and MLE. Dynamic assessment procedures do not have a 'manualised' approach/scoring procedure; therefore continuous supervision from an experienced Educational Psychologist, (with a specialism in DA) would be a core requirement in the application of DA by 'novice' psychologists in order to apply DA methods and interpret findings effectively.

Research (Bosma and Resing 2012) has indicated that the application of DA approaches is useful for guiding instructions for specific individual needs. However, further follow-up is required to ensure the recommendations are being implemented into instructional practice. School staff may benefit from additional training on the concepts of DA and the implementation of mediation approaches to allow this approach to be incorporated into education programmes (Bosma and Resing, 2012). Follow-up is further supported by Yeomans (2008), who further draws attention to the

role the EP can play in order to support schools in understanding the concepts and terminology often used in DA.

5.4.iii Next steps

As previously noted, a number of immediate SCM changes (particularly memory (*AM*) and strategic thinking (*AS*)) could be observed in the Will's cognitive skills following further assessment and mediation. Feuerstein (1980) notes that following assessment and intervention aimed to bring about SCM, many learners are able to apply their new problem-solving skills to new situations; however he also recognises that longer-term mediation and intervention are required for permanent SCM to be observed. Therefore in an attempt to bring about long-term SCM in Will's cognitive processing, one of the recommendations agreed upon was that I would work alongside Will and his TA to support the TA in further developing her mediation skills, while the TA, in turn would continue to assist Will in developing and generalising his thinking and problem-solving skills in a wider context.

5.5 Concluding comment

This paper reports my endeavour to apply psychological theory to practice (Sternberg 2008) connecting with traditional theories of learning (e.g. Miller et al 1960, Piaget 1960, Vygotsky 1962, Sternberg 2008). My findings, alongside more substantive published research (Feuerstein 1980, Adey and Shayer 1994, Shayer and Adey 2002, Sternberg 2008, Bosma and Resing 2012) illustrate the effect that high-quality social interaction (mediation) can have on cognitive functioning. The findings from

this case exemplar have contributed to the existing knowledge of DA methods which were grounded in the principles of DA, SMC and MLE.

On reflection, I feel this casework has allowed me to explore the principles and applications of DA in greater detail. As a result I would now feel more confident in using this approach as part of my core practice and feel that I have started to develop an effective framework to consult, gather information, assess and evaluate information from a number of sources, and use assessment data to support the cognitive development of the focus child.

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Appendices

APPENDIX 1: A completed CAP record form

CAP™ Cognitive Abilities Profile

Summary Form

☑ Baseline Profile ☐ Review 1 ☐ Review 2 ☐ Review 3

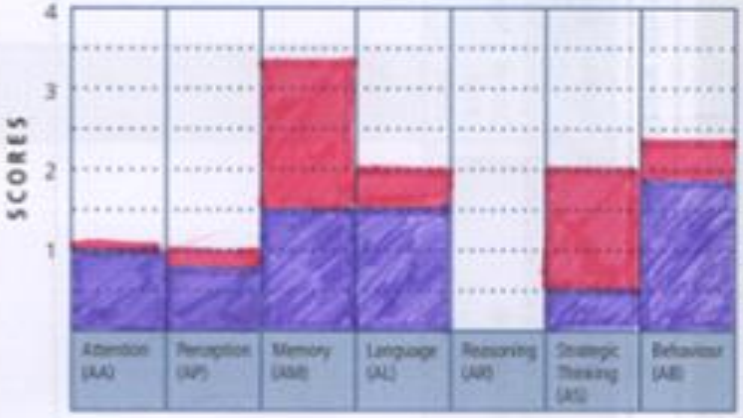
Registered CAP user number: University of Birmingham

Initial reason for profile:
identify appropriate intervention (classroom support)

Name:	[redacted]
Date of profile:	30th may 2012
Date of birth:	7th June 2012
Age at time of profile:	8years 11months
Gender:	male
School(s):	[redacted]
School year and teacher:	4/4 - [redacted]
Name of profiler:	sarah williams

How was the information for the profile gathered?
(eg observation, consultation, etc)
classroom observation (45mins - maths).

Average scores from Section A: Cognitive Abilities of the Learner
(shade the columns to show the average score for each subsection)



Scoring Key

N	1	2	3	4
Not observed / Not applicable	Not able, even with support	Only able with support	Sometimes able / inconsistent	Independently able

pre 1:1 intervention
post 1:1 intervention

SECTION A: Cognitive Abilities of the Learner

Areas of strength: - pre 1:1 intervention
- behaviours affecting learning
- language + memory

Areas of difficulty: - pre 1:1 intervention -
- strategic thinking
- perception
- attention

SECTION B: The Learner's Response to Teaching and Mediation

Strategies the learner most responded to:
- A range of modes (visual, auditory + kinaesthetic)

Strategies the learner least responded to:
- Relating meaning to the task
- understanding the objectives of the task
- independent working

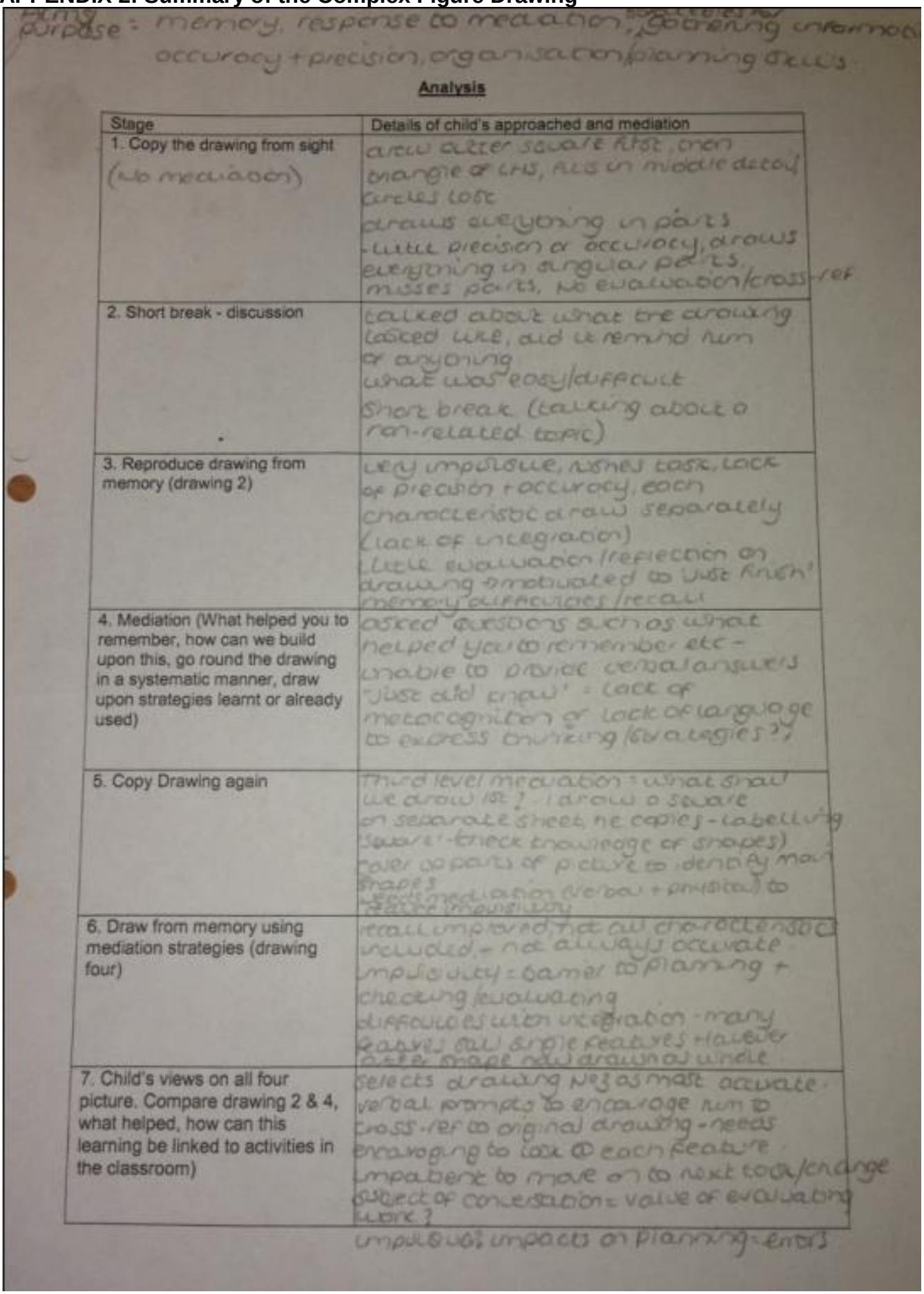
SECTION C: Task Analysis for Classroom Observation

Task aspects which lead to success:
- Bridging by an adult
- using visual prompts
- modelling

Task aspects which lead to difficulty:
- self evaluation
- independent working
- memory (if gaps)

CAP Summary Form

APPENDIX 2: Summary of the Complex Figure Drawing

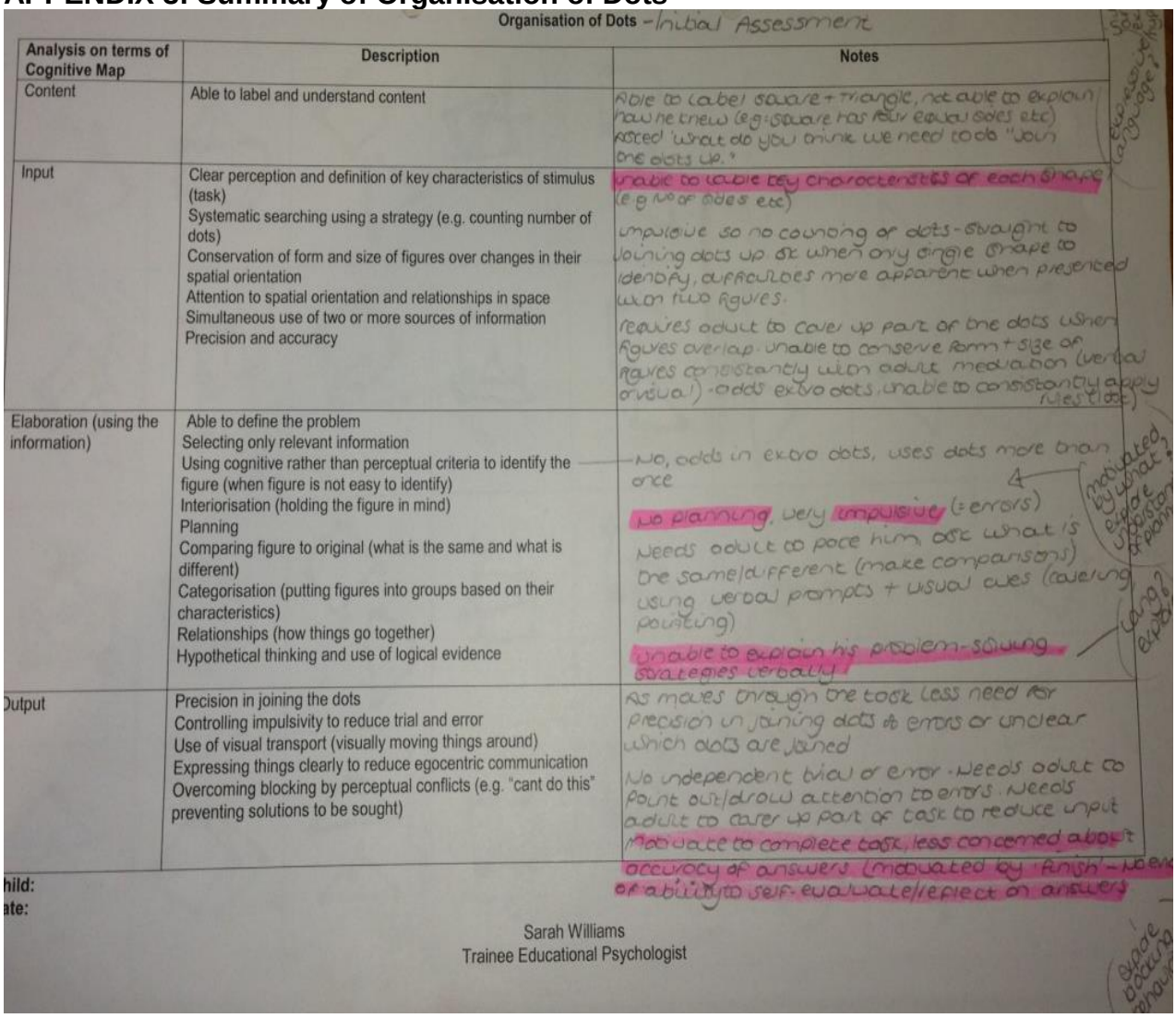


Purpose: memory, response to mediation, [illegible] information accuracy + precision, organisation/planning skills

Analysis

Stage	Details of child's approached and mediation
1. Copy the drawing from sight (no mediation)	drew after square first, then triangle of this, fills in middle detail circles lost draws everything in parts - little precision or accuracy, draws everything in singular parts, misses parts, no evaluation/cross-ref
2. Short break - discussion	talked about what the drawing looked like, did it remind him of anything what was easy/difficult Short break (talking about a non-related topic)
3. Reproduce drawing from memory (drawing 2)	very impulsive, rushes task, lack of precision + accuracy, each characteristic draw separately (lack of integration) Little evaluation/reflection on drawing + motivated to just finish' memory difficulties/recall
4. Mediation (What helped you to remember, how can we build upon this, go round the drawing in a systematic manner, draw upon strategies learnt or already used)	asked questions such as what helped you to remember etc - unable to provide verbal answers 'just did know' - lack of metacognition or lack of language to express thinking/strategies?)
5. Copy Drawing again	Third level mediation - what shall we draw 1st? - I draw a square on separate sheet, he copies - labelling 'square' - check knowledge of shapes) refer to parts of picture to identify main shapes Needs mediation (verbal + physical) to [illegible]
6. Draw from memory using mediation strategies (drawing four)	recall improved, that all characteristics included - not always accurate impulsivity - barrier to planning + checking/evaluating difficulties with integration - many leaves all single features + have one little shape now drawn at middle
7. Child's views on all four picture. Compare drawing 2 & 4, what helped, how can this learning be linked to activities in the classroom)	selects drawing No3 as most accurate verbal prompts to encourage him to cross-ref to original drawing - needs encouraging to look @ each feature impatient to move on to next task/change subject of conversation = value of evaluating work? impulsivity impacts on planning + errors

APPENDIX 3: Summary of Organisation of Dots



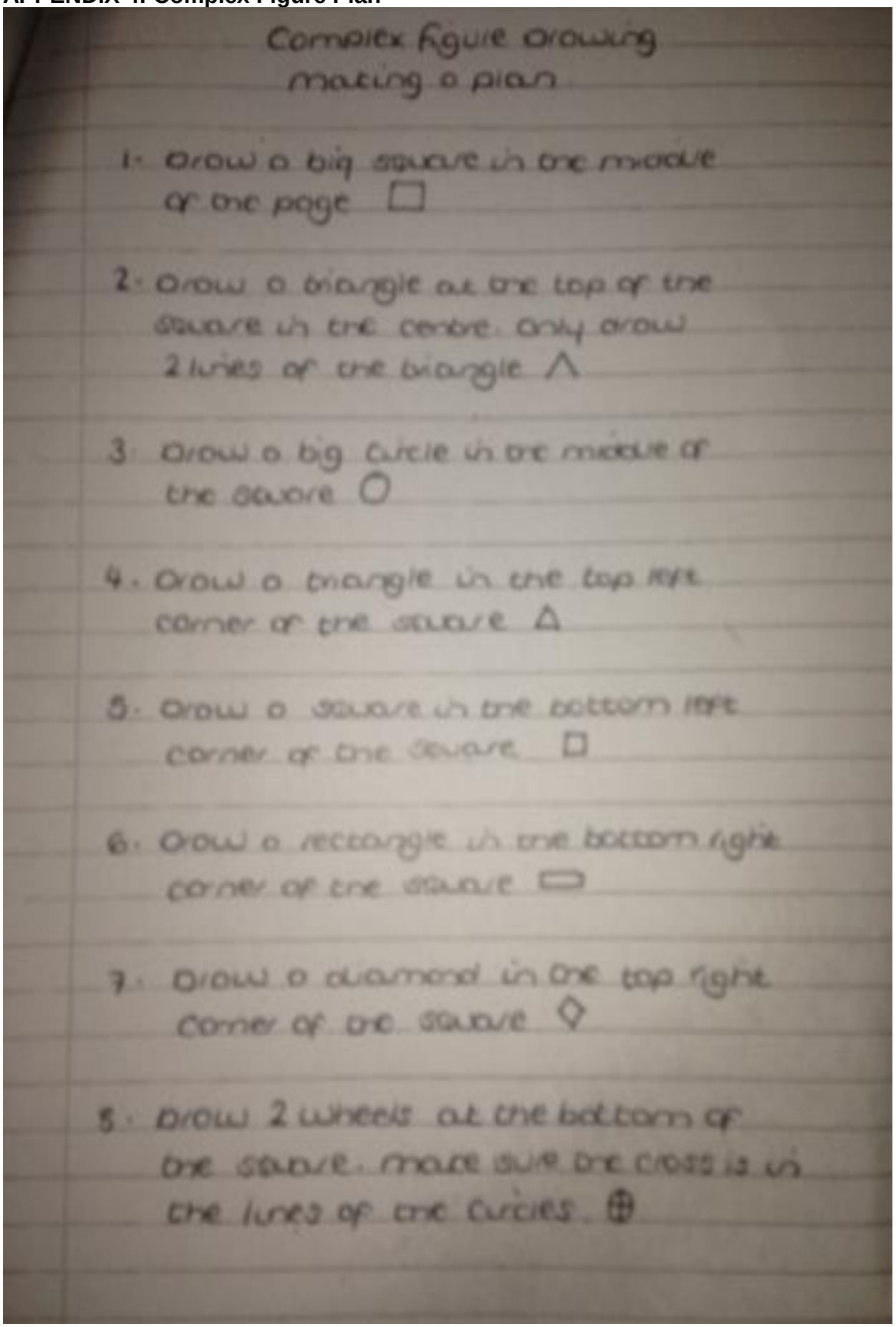
Organisation of Dots – Initial Assessment

Analysis on terms of Cognitive Map	Description	Notes
Content	Able to label and understand content	Able to label square + triangle, not able to explain how he knew (e.g: square has four equal sides etc) Asked 'what do you think we need to do "join the dots up."'
Input	Clear perception and definition of key characteristics of stimulus (task) Systematic searching using a strategy (e.g. counting number of dots) Conservation of form and size of figures over changes in their spatial orientation Attention to spatial orientation and relationships in space Simultaneous use of two or more sources of information Precision and accuracy	Unable to label key characteristics of each shape (e.g No of sides etc) Impulsive so no counting of dots - straight to joining dots up etc when only single shape to identify, difficulties more apparent when presented with two figures. Requires adult to cover up part of the dots when figures overlap. Unable to conserve form + size of figures consistently with adult mediation (verbal + visual) - adds extra dots, unable to consistently apply rules (lost)
Elaboration (using the information)	Able to define the problem Selecting only relevant information Using cognitive rather than perceptual criteria to identify the figure (when figure is not easy to identify) Interiorisation (holding the figure in mind) Planning Comparing figure to original (what is the same and what is different) Categorisation (putting figures into groups based on their characteristics) Relationships (how things go together) Hypothetical thinking and use of logical evidence	No, adds in extra dots, uses dots more than once No planning, very impulsive (= errors) Needs adult to pace him, ask what is the same/different (make comparisons) using verbal prompts + visual cues (tracing pointing) Unable to explain his problem-solving strategies verbally
Output	Precision in joining the dots Controlling impulsivity to reduce trial and error Use of visual transport (visually moving things around) Expressing things clearly to reduce egocentric communication Overcoming blocking by perceptual conflicts (e.g. "cant do this" preventing solutions to be sought)	As moves through the task less need for precision in joining dots & errors or unclear which dots are joined No independent trial or error - needs adult to point out/draw attention to errors. Needs adult to cover up part of task to reduce input Motivate to complete task, less concerned about accuracy of answers (motivated by 'finish' - no evidence of ability to self-evaluate/reflect on answers)

Child:
Date:

Sarah Williams
Trainee Educational Psychologist

APPENDIX 4: Complex Figure Plan



Complex figure drawing
making a plan

1. Draw a big square in the middle of the page □

2. Draw a triangle at the top of the square in the centre. only draw 2 lines of the triangle △

3. Draw a big circle in the middle of the square ○

4. Draw a triangle in the top left corner of the square △

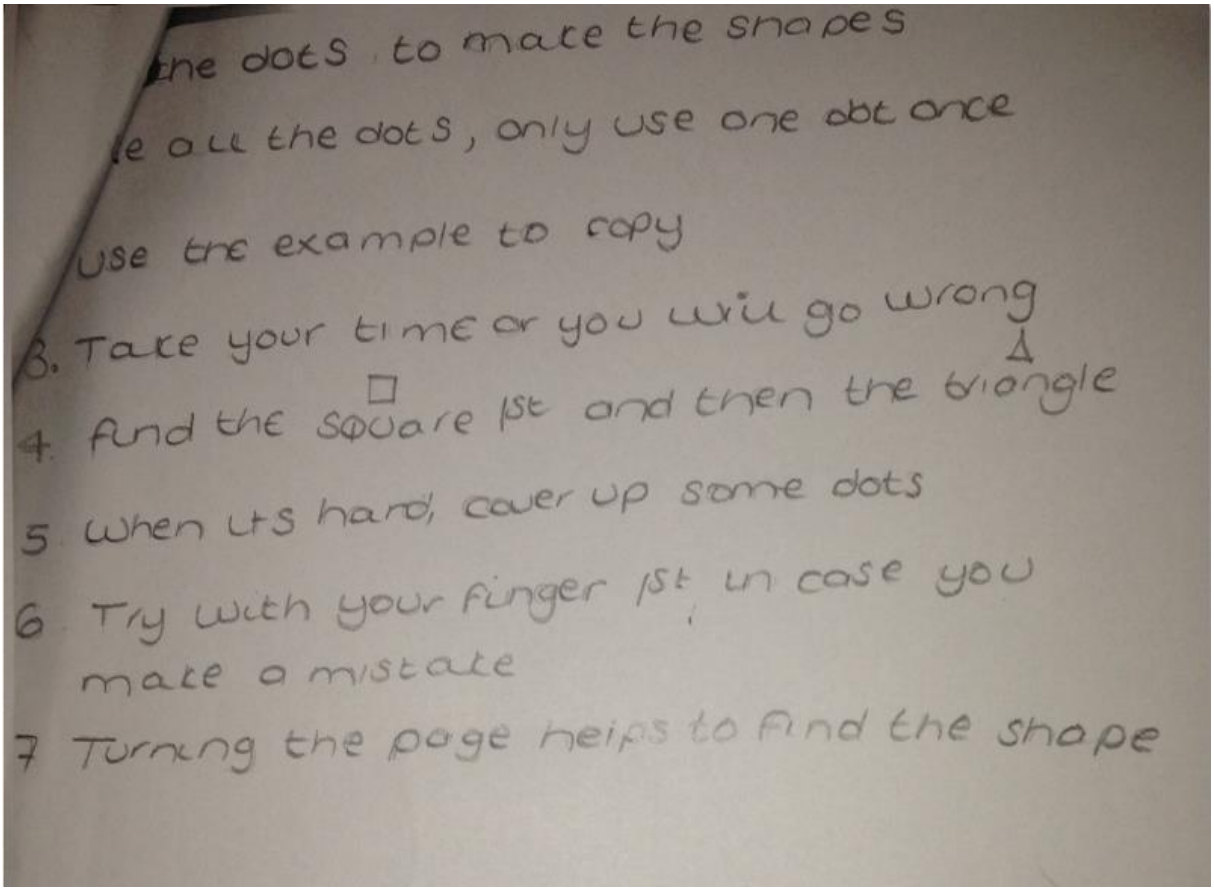
5. Draw a square in the bottom left corner of the square □

6. Draw a rectangle in the bottom right corner of the square ▭

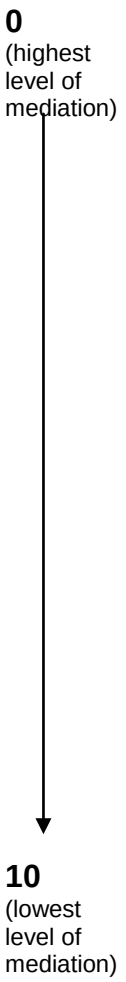
7. Draw a diamond in the top right corner of the square ◇

8. Draw 2 wheels at the bottom of the square. make sure the cross is in the lines of the circles. ⊕

APPENDIX 5: Organisation of Dots
Plan



APPENDIX 6: Levels of Mediation



Hand over hand guidance

Modelling with initial guidance which is withdrawn

Modelling the task using specific examples of rules, concepts and strategies

Pointing out general characteristics (but not specifically related to the task)

Asking for further application of strategies used previously; using previously produced change

Teaching how to choose appropriate strategies, used previous input from mediation

Student applies previous strategies and rules with increasing flexibility

Previous mediation internalised and fully self regulating

Taken from J. Yeomans from R. M. Deutsch and LPAD Manual (2003)

APPENDIX 7: Will's maths plan: Addition

6 + 5

Step	Rules	
1		Get all of the equipment: Pencil Book Colourful cubes
2		Make an 'add' sign with the cubes
3		Put 6 cubes on the left side of the add sign
4		Put 5 cubes on the right side of the add sign
5		Move the add sign and put all the cubes together
6		Count the all of the cubes
7		Write the answer in my book

APPENDIX 8: Feedback to Will

Dear XXX,

It has been lovely working with you over the last couple of months. I have enjoyed getting to know you.

I have been very pleased with how hard you worked with me every week. Some of the work we did was very difficult so I was even more pleased that you stuck with it and did not give up.

I have written a long report for your teacher and parents, but I wanted to write you your own one that includes the important bits.

The things that I think you found easy to do or were very good at were:

- Being very friendly and helpful
- Being very well behaved
- Having a creative imagination
- The Play-Dough game
- Drawing and making up stories for the Super-Hero School

The things that I think were difficult for you were:

- Staying focused on the task without becoming distracted
- Concentrating for a long time
- Checking your own work

I have met with Mrs XXXX and explained the work that we did and we have agreed on some ways to try and help you in class. Some of the things you could do are:

- ★ Make a plan before you start so you know what you have to do at each step
- ★ Make sure you have all the equipment you need before you start
- ★ Always check your work carefully when you have finished

Thank you again for working so hard XXX, remember always have a go and don't be afraid to say if you don't understand… it is ok to make mistakes if you have tried your best!!!.

I wish you lots and lots of luck for your future.

Sarah

Sarah Williams
(Trainee Educational Psychologist)