**VOLUME TWO**

# FIVE PROFESSIONAL PRACTICE REPORTS COVERING SALIENT DOMAINS OF EDUCATIONAL PSYCHOLOGY PRACTICE

**BY**

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# CHAPTER ONE

# VOLUME II: AN OVERVIEW

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# VOLUME II: AN OVERVIEW

## 1. Introduction

The author is part of the first cohort of Trainee Educational Psychologists (TEPs) accepted onto the Doctoral training course in Applied Educational and Child Psychology at the University of Birmingham. The author began her training in September 2006 which, it could be argued, was an exciting but uncertain time for trainees and the educational psychology profession as a whole, because it marked the beginning of the new training route. This meant that instead of completing a one year Master's course people wishing to become Educational Psychologists (EPs) needed to complete a doctoral programme of study. This included securing jobs as TEPs in a local authority Educational Psychology Services (EPS) for years 2 and 3 of the training programme. Thus, as well as being full-time students and needing to meet the requirements of the doctoral training course, local authority service requirements also needed to be met.

The thesis submitted for the Doctorate in Applied Educational and Child Psychology comprises two volumes of work. This volume presents five Professional Practice Reports (PPRs) in Chapters 2 to 6. Each PPR provides an account of EPS work undertaken by the author and taken collectively the PPRs demonstrate some of the diverse work and learning experiences that have been engaged with over years two and three of doctoral training.

The university course provided guidance on broad areas which the PPRs should focus on. These included: multi-agency work, implementation of a group intervention, work surrounding a child with complex individual needs, a critical review of a piece of longitudinal casework, and an account of a specialist work placement. It was, however, the task of the TEP to negotiate and carry out suitable work. The first 4 PPRs cover the focus areas suggested by the university. However, it was not possible to organise a specialist work placement. This illustrates the difficulties of having to marry university guidance with the realities of being an employee of a local authority EPS. Thus, a deviation had to be made which allowed for PPR 5. This PPR provides cohesiveness to Volume II by demonstrating the important role EPs can play in providing training on evidence based educational interventions.

In addition to meeting university course requirements and demonstrating a wide range of educational psychology experiences, the work presented in this Volume demonstrates how the author's practice incorporates the functions which the Scottish Executive (2002) identify as the core work of EPs and makes clear the distinctive contribution of educational psychology practice (Cameron, 2006).

The five core functions of EP work, identified by the Scottish Executive (2002) are: assessment, intervention, consultation, training and research. Boyle and Lauchlan (2009) explain that these identified functions are supported by the DfEE (2000) and by Farrell et al. (2006) in regards to the role of EPs in England and Wales. Cameron (2006) identifies five distinctive conceptual processes which make EPs' perspectives different from other professionals. These processes are stated as: the adoption of a psychological perspective to

human problems, making clear mediating/psychological variables which link specific situations to outcomes, using psychological knowledge to create explanatory models of complex human problems, using evidence based strategies to effect change, and sharing ideas from psychology (Cameron, 2006).

## 2. Contextual information and the role of the Trainee Educational Psychologist in the local authority Educational Psychology Service

The TEP completed years 2 and 3 of doctoral training as a TEP employed by a West Midlands local authority Educational Psychology Service (EPS). The West Midlands local authority could be described as large and urban with a population of about one million. In response to the extensive and diverse needs within the local authority and the demand on educational psychology services, at the time of writing, the EPS where the TEP worked employed the equivalent of 52 full time EPs, seven TEPs and six graduate psychologists.

EPs working for the West Midlands local authority are assigned to one of six small development teams, which cover an area of the local authority. The TEP was assigned to a team which covered central areas of the city. She worked primarily in two inner-city areas which were south-east of the city centre. EPs who worked in this team generally had a smaller patch of schools than colleagues in some other areas of the city, because schools tended to have a higher number of pupils identified as having Special Educational Needs. The schools in the two areas where the TEP worked had a culturally diverse pupil intake with the majority of pupils having Asian Muslim heritage.

During the two years as an EPS employee the TEP delivered educational psychology services to five primary schools and a secondary school. During the first year the TEP worked alongside an experienced EP, who acted as her supervisor over the two years. In the second year the TEP worked with much more autonomy and took responsibility for school service delivery, in essence acting as the visiting EP for the schools. As part of ongoing professional development regular supervision sessions with an experienced EP were maintained over years 2 and 3.

Routine service work to the school settings included consultation with school staff and families and offering training and advice on psychologically based interventions, strategies and approaches. Assessment and therapeutic work with children and young people and work to inform the Statutory Assessment process (DfES, 2001) was also undertaken.

As well as providing EPS support to a patch of schools the TEP completed work with pre-school children, their families and other agencies working with them, and children who were referred to the EPS on a 'non-routine basis' for example, children newly arrived to the authority or educated outside of the local authority. Development work within the local authority was also carried out. This included contribution to local authority initiatives on supporting the needs of newly arrived pupils and seeking out ways to support behaviour management in secondary schools.

## 3. A synopsis of the five Professional Practice Reports

In the area where the TEP worked their was a high incidence of complex medical difficulties in pre-school children and this provides a focus area for PPR 1 (see Chapter 2) and PPR 3 (see Chapter 4). Preventative work and capacity building in schools has been a high priority for the EPS for many years. However, during a whole-service presentation delivered by the Chief Educational Psychologist in July 2008 a renewed emphasis was placed on EPS activities which support school staff in developing confidence and skills to support the needs of vulnerable young people in their schools, and also generalising knowledge gained in one situation to work preventatively in new situations. PPR 2 (Chapter 3), PPR 4 (Chapter 5) and PPR 5 (Chapter 6) provide accounts of educational psychology practice which the author considers is able to contribute towards preventative work and capacity building in schools.

The 1st PPR (see Chapter 2) recognises that EPs are expected to work with a wide range of professionals (DfEE, 2000). This PPR argues that multi/inter agency work is complex because definitions of this type of work can be challenging to understand, meaning that professionals working together may have different understandings of key terms. A review of research literature shows that there are a variety of standpoints in regards to the effectiveness of multi/inter agency work, some favourable, and others less so. The PPR demonstrates that a range of potentially facilitating factors and barriers to effective multi/inter agency work have been identified in literature. However, there is still a need for conceptual frameworks to aid understanding of multi/inter agency work (Easen et al. 2000 and Leadbetter et al. 2007). Accepting this need, Activity Theory (Engestrom, 1999) is

drawn upon to create a second generation Activity System (Engestrom, 1999) for casework which involves a pre-school child with complex needs. It is hypothesised that using the Activity System will help the TEP to conceptualise multi/inter agency work. A descriptive account of how an Activity System has been used to support the multi/inter agency casework, together with its benefits and limitations, is presented.

The 2nd PPR (see Chapter 3) suggests that it is important for EPs to reflect on how they can work preventatively to promote mental health in children. It proposes that Cognitive Behavioural Therapy (CBT) in a group school based context can be effective in meeting the needs of children at risk of developing mental health difficulties. The PPR critically reviews 4 school based CBT interventions and argues that previous CBT evaluations have not systematically explored what aspects of the intervention were effective from programme participant's perspectives. To extend previous research an illuminative single case study design is used to qualitatively explore factors which impede and facilitate a school based CBT intervention from programme participant's perspectives. In order to gain participant's views two qualitative methods 'The Ideal Self' technique (Moran, 2001) and aspects of Realistic Evaluation (Pawson and Tilley, 1997) which have not been used previously, in the context of CBT evaluations, have been trialled.

Results showed that following the CBT intervention all participants considered they had moved closer to the 'person they would like to be' (Moran, 2001). Moreover, using aspects of Realistic Evaluation (Pawson and Tilley, 1997) allowed participants to identify factors inherent and external to the intervention which facilitated and impeded their progress. The

author concludes that further research focussing on creating and evaluating trustworthy qualitative data collection methods to gain programme participant's perspectives is needed.

The 3rd PPR (see Chapter 4) explores what the impact of a complex chronic medical condition may be on a pre-school child and their family and investigates the contributions an EP can make at various ecological levels. The PPR begins by offering a contextual backdrop which provides an overview of X's (child with a chronic medical condition) referral and the aetiology of his medical condition. Aspects of Woolfson et al.'s (2003) Problem Analysis Framework are used as a springboard to identify and explore problem dimensions at a range of ecological levels, with particular attention paid to the ways in which EPs can impact at a macro system level.

This PPR concludes by noting that the Woolfson et al. (2003) framework was useful in supporting identification of problem dimensions at various ecological levels and that EPs can impact positively at these levels. Further research, which evaluates the effectiveness of the Woolfson et al. (2003) framework from parents' perspectives and explores how EPs can include the voice of the child in their work, is recommended.

The 4th PPR (see Chapter 5) provides a reflective review of a piece of educational psychology casework, which involved a child with learning difficulties and selective mutism. The author recognises that although hypotheses leading to a behavioural intervention were confirmed by key stakeholders, the approach to intervention implementation was overly directive. The author provides a critical perspective on systems models and their evolution and argues that concepts from systems engineering (Jenkins,

1972, Gillham, 1978) could have been usefully applied in order to: define the system under study, wider system issues and to support collaborative working so that intervention objectives had the consensus of stakeholders, and met the needs of the system. The author also demonstrates that concepts from General Systems Theory (von Bertalanffy, 1968) such as viewing the school as an open system, circular causality, punctuation, homeostasis and information feedback can be useful in analysing interactions and beliefs between individuals in various sub-systems, and facilitate the sharing of perspectives. This PPR concludes that had concepts from systems engineering (Jenkins, 1972, Gillham, 1978), and General Systems Theory (von Bertalanffy, 1968) been used during the course of the casework better outcomes may have been realised. Further exploration of using systems approaches within the constraints of a school system is recommended.

Finally, the 5th PPR (see Chapter 6) recognises, through provision of a descriptive vignette of the TEP's delivery of Direct Instruction training, the role EPs have in identifying, constructing and delivering evidence based educational interventions in order to support capacity building in schools. Taking guidance from Solity et al (2000), this PPR argues that in order to promote reading interventions EPs must have up to date theoretical, psychological and pragmatic knowledge which can support them in devising and delivering training to schools and importantly maintaining integrity as evidence based applied psychologists. This PPR offers useful and contemporary information to enhance extent EPS training materials which exist in the EPS Direct Instruction (DI) training manual for teaching basic reading skills (Raybould et al. 2006).

The PPR begins by providing background information on frameworks guiding the teaching of Literacy in England and examines pedagogy to teaching reading. The PPR then focuses on providing an in-depth examination of the DI teaching approach, which is promoted in the EPS the TEP works for, and has been suggested as a very effective method for improving reading skills (Carnine et al. 2004).

The PPR concludes that generic DI principles can offer an effective teaching approach to school staff. However, it is suggested that EPs offering DI training in schools and to EP colleagues supplement the information available in the EPS DI manual (Raybould et al. 2006) with theoretical perspectives on teaching reading, an overview of the psychology which underpins the DI approach, an overview of extent DI research, and an account of the benefits and limitations of the approach. Furthermore, in order to extend the evidence base for using generic DI principles, it is suggested that EPs gather outcome data on how the DI approach has been embedded in school contexts and with what results. This will involve ensuring intervention evaluation is built into training delivery.

## 4. Concluding comments

Gersch (2009, p.10) argues that;

> for educational psychology to be a valued, vibrant, adequately funded profession with an assured future, EPs need most of all to be seen as relevant, with their work deemed to be valuable and useful.

During the course of the author's training there existed uncertainty concerning the feasibility of the training route and the availability of jobs for TEPs. It is hoped that the reader will consider the work presented in this Volume to be useful and valuable.

Moreover, it is anticipated that as well as meeting university course requirements, collectively the PPRs demonstrate the broad but distinctive and valuable role that EPs have in supporting children, schools and families, and reinforces the need to support training routes for future generations of EPs.

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# CHAPTER TWO

# APPLYING ACTIVITY THEORY TO ASSIST CONCEPTUALISATION OF EARLY YEARS CASEWORK INVOLVING MULTI/INTER AGENCY COLLABORATION

## ABSTRACT

Educational Psychologists (EPs) are expected to work with a wide range of professionals (DfEE, 2000) and recent government literature advocates that professionals working with children and families work in a multi/inter agency capacity. With these factors in mind this Professional Practice Report (PPR) argues that multi/inter agency work is complex. Definitions of multi/inter agency work can be challenging to understand, meaning that professionals working together may have different understandings of key terms. A review of research literature will demonstrate that there exist a variety of standpoints in regards to the effectiveness of multi/inter agency work, some of which are favourable, and others less so. The author will demonstrate that a range of potential facilitating factors and barriers to effective multi/inter agency work have been identified, but that there is still a call for conceptual frameworks to aid understanding (Easen et al.2000).

The author seeks to demonstrate that applying a theoretical framework, as Leadbetter et al. (2007) suggest, can aid understanding of multi/inter agency work. Activity Theory (Engestrom, 1999) will be drawn upon to create a second generation Activity System (Engestrom, 1999) for casework which involves a pre-school child with complex needs. It is hypothesised that using an Activity System will help a Trainee Educational Psychologist (TEP) to conceptualise multi/inter agency work. A descriptive account of how an Activity System has been used, its benefits and limitations will be presented.

# APPLYING ACTIVITY THEORY TO ASSIST CONCEPTUALISATION OF EARLY YEARS CASEWORK INVOLVING MULTI/INTER AGENCY COLLABORATION

## 1. Introduction

The importance of working with a wide range of professionals in a problem solving capacity has been highlighted in literature. For example, the DfEE (2000) report clearly indicates that educational psychologists (EPs) need to work closely with a range of agencies and professionals so they can promote child development and learning through the application of psychology. Harris (1999 p.246) writes that 'problem solving and decision making within a multi-professional context is an important aspect of an educational psychologist's role.'

Leadbetter et al (2007) explain that when there is a multiplicity of variables, as with multi-agency working, anchoring research to a theoretical model can help to provide a coherent framework. They suggest that Activity Theory (AT) is a useful tool to analyse and understand complex work-based practices because it addresses individual actions within wider social, cultural and historical contexts.

This professional practice report (PPR) will explore the complex nature of defining key terms surrounding multi/inter/trans agency working and why the drive towards multi/inter agency working has come about. Table 1.0 will illustrate barriers to multi/inter agency working and methods to overcome these. Section 5 onwards will describe Activity Theory (Engestrom, 1999) and use a case study example of aspects of a trainee educational psychologist's (TEP)

work to demonstrate how an Activity System can be used in praxis to understand the complexities involved in multi/inter agency casework.

## 2. Defining key terms

Leadbetter et al. (2007) explains that there are various definitions and understandings of multi-agency work, writing that 'multi' and 'inter' are used as prefixes to 'agency', 'disciplinary' and 'professional'. Hughes (2006) agrees pointing out that the same understanding of multi-agency work is probably not shared amongst professionals from different agencies.

The DfES (2005 p.25) document defines multi-agency working as 'Agencies, organisations and individuals working together.' This definition could be criticised as being conceptually weak and simplistic because complexities in interpreting the term 'working together' are not explored.

Walter and Petr (2000) draw out distinctions between terms such as co-operation (informal exchange between agencies), co-ordination (formal relations between agencies, e.g. sharing plans but maintaining their own goals), collaboration (joint activities and shared resources) and integration (full multi-agency work such as joint training, attendance at review meetings and joint case/project work).

Hughes (2006) clarifies the difference between 'inter' and 'multi' agency work. He writes that 'inter' involves different groups of professionals and 'multi' involves professionals which are

located in the same group. Expanding even further, Hughes (2006) explains that 'discipline' refers to specific knowledge underpinning professionals and that 'agency' usually refers to the administrative structure which professionals belong to. Using Hughes' (2006) definitions as a guide, the word multi-disciplinary would mean professionals from the same group, (e.g. Inclusion Services) who have different knowledge bases and inter-agency would mean professionals who belong to different administrative agencies possibly from different 'disciplines'.

To add complexity to this issue Doyle (1997) describes multi-disciplinary work as involving professionals working in parallel, carrying out their own assessments and then coming together to provide recommendations. Inter-disciplinary working, is similar, in that professionals will carry out their own assessments and formulate recommendations but will then meet as a team to discuss recommendations and agree on how to proceed.

Sloper (2004) writes that multi-disciplinary working involves individuals working within a single agency, where the focus is on the priorities of that agency. Therefore, agreeing with Hughes (2006) and Doyle (1997). However, she adds that co-ordination with other agencies is rare, explaining that assessment and provision of services will be mainly controlled by individual professionals working separately. She also notes that an equal partnership approach with families may be rare.

In terms of interdisciplinary working Sloper's (2004) definition concurs with Hughes (2006). Sloper (2004) agrees this is when professionals from different agencies separately assess the needs of child and family and meet together to discuss findings and set goals. She adds

another dimension, introducing the term trans-disciplinary working as members of different agencies working together jointly, sharing aims, information, tasks and responsibilities. She states that this is a more holistic approach because it is centred on the needs of the child and family.

This summary of terms demonstrates that the semantics in this area are complex. It is possible that professionals are not aware of the range of terms, do not fully understand terms and/or interpret them in different ways. If understandings of key terms and the philosophies underpinning these terms are not shared the actions and attitudes of professionals who will be working together may not be compatible.

## 3. The drive towards multi/inter agency working

Hughes (2006) writes that recent government documents provide a vision for children's services built around close multi-agency working and multi-disciplinary teams. Little et al. (2003) and Dowling et al. (2004) explain that partnership working has become a central feature of the Labour government's social welfare policy. Dalzell et al. (2007) make reference to national guidance that encourages professionals to work in partnership. They refer to standards in the National Service Framework (DH 2004, cited in Dalzell et al 2007) and guidance in Every Child Matters: Change for Children (DfES, 2004 cited in Dalzell et al. 2007). Government initiatives, such as the Common Assessment Framework (DfES, 2007) also promote interagency work.

The Laming Report (2003) came from an inquiry into the tragic abuse and murder of a little girl called Victoria Climbié by her guardians in 2000. This report renewed the impetus for collaborative multi-agency working. The report highlighted the need to improve multi-agency working so that effective child protection services could be ensured. Thus, a plethora of government initiatives assume that multi-agency working is something professionals need to strive towards.

## 4. Facilitators and barriers to multi/inter agency work

Barclay and Kerr (2006 p.36) write that 'effective collaboration working has many potential benefits.' They provide examples such as supporting minimal intervention, a reduction in the replication of assessments and protection for professionals and children when decisions are made together. Abbott et al. (2005) report that professionals felt they were able to offer a more effective service to families when they worked in a multi-agency capacity.

However, research has also identified barriers to multi-agency working. Sloper (2004) notes that changes need to take place at a range of levels such as individual practice, within agencies and at organisational levels in order for multi-agency work to be effective. She points out that a lack of co-ordinated multi-agency working in children's services has been highlighted in research studies and argues for evidence on the facilitators and barriers of multi agency working so that this can inform local practice.

Little et al. (2003) note that inter-agency data has shown that although there is a lot of exchange between children's services most of this is concerned with dividing up tasks. They

make the point that few children benefit from inter-agency cooperation at the point of service delivery noting that it is usually one agency that bears the brunt of responsibility.

Leadbetter at al. (2007) write that Every Child Matters (ECM, DfES, 2003) documentation urges professionals to form teams around the child and family. It acknowledges that professionals need to work together in new ways and break down barriers. However, they state that guidance on how professionals should work together, what is taken from old practices and what will need to be constructed as new practices, is unclear.

Hughes (2006) also criticises ECM literature for making the notion of multi-agency working appear straightforward and for assuming inherent success in this way of working. He points out that comments about the effectiveness of multi-agency working in ECM literature are not evidence based or derived from valid and reliable research. Therefore, he controversially challenges prevailing views of multi-agency working as the ideal, proposing that it is important to critically examine the purpose of multi-agency working and to question its benefits. Hughes (2006) comments, that if multi-agency working is the solution to a problem, as suggested in most government literature, one must understand what this solution comprises.

Easen et al. (2000) support Hughes (2006). They are also wary of assuming that multi/inter agency working is straightforward. They point out that there is 'a strong thread of evidence which points to the problematic nature of inter-professional collaboration' (Easen et al. 2000 p356). They explain that it is important to understand what happens when different professionals work together but note that many studies lack conceptual frameworks to assist

understanding of multi/inter agency work. Exelby and Hall (1995, cited in Easen et al 2000) and Stapley (1994, cited in Easen et al 2000) suggest that information about what happens when different professionals work together remains hidden in project reports which are not circulated on a large scale.

To summarise, there exists a body of research, which suggests a need for reliable and valid research to investigate the outcomes of joined up multi/inter agency work as well as the processes involved in effective joint working. (Hughes, 2006 and Sloper, 2004) Exelby and Hall (1995, cited in Easen et al. 2000) and Stapley (1994, cited in Easen et al. 2000) identify the need to share information about what happens when professionals work together across agencies and disciplines. Table 1.0 summarises research literature exemplifying barriers to multi/inter-agency work. Bold text illustrates the author's conceptualisation of key themes which appear to be barriers to effective multi/inter agency work. The author has also attempted to map facilitating factors, from research literature, to barriers so that potential solutions can be seen at a glance.

**Table 1.0: Barriers and facilitators to multi/inter-agency work**

| Research | Barriers | Research | Facilitators |
|---|---|---|---|
| | **1. Lack of conceptual frameworks and systems** | | |
| Salmon (2004) | - Multi-agency collaboration has not been adequately conceptualised and so there exists no comprehensive model of factors relevant to its success. | Davis et al. (2001, cited in Dalzell et al. 2007) | - Professionals have a solid understanding of each others roles as well as their own so that they provide co-ordinated and efficient services. |
| Young et al. (2005) | - Joint working is poorly developed despite political guidance. | Hughes (2006) | - Need to develop understandings of effective systems 'that facilitate multi-agency working, which can 'encourage' or create climates for 'good' multi-agency work. |
| Hughes (2006, p.63) | - Systems seem to rely on the 'professional integrity' of those involved in a piece of case work. | | |
| Easen et al. (2000) | - Different interpretation of crisis situations. | Easen et al. (2000) | - All involved have a clear picture of what a framework for considering inter-professional collaboration looks like. |
| Harris (1999) | - Uncertainty about information sharing in terms of confidentiality and preferred format. | | |

| | | | |
|---|---|---|---|
| Young et al. (2005) and Easen et al. (2000) | **2. Differing service priorities**<br><br>- Models of multi-professional working are difficult to change because services have different priorities. | Davis et al. (2001, cited in Dalzell et al. 2007) | - Professionals have a solid understanding of each others roles as well as their own so that they provide co-ordinated and efficient services. |
| | **3. Differing beliefs and protocols of services and professionals** | Harris (1999) | |
| Harris (1999) | - Professionals can incorrectly assume that when two or more are involved in decision making they will be able to make more effective decisions | | - Arrange suitable meeting times in consultation with stakeholders to encourage attendance, the availability of information and exemplify the importance of people's attendance. |
| Harris (1999) | - Personal factors influence decision making such as professionals' personal histories, biases and levels of stress. | Harris (1999) | - Encourage a structure for meetings so that participants can express their opinions, ensure the decision making process is transparent, model behaviours such as preparing written information, making clear decision criteria and feeding back to participants the effects of their decision. |
| Harris (1999) | - Inequality of participant's contributions: some professionals wary of inter-professional relationships, anxiety about how their views would be received by others present. | | |

| | | | |
|---|---|---|---|
| Miller et al. (1993)<br><br>Easen et al. (2000) | - Lack of consistency because multi-agency team outcomes can be dependent on the lead professional (for example the professional chairing the meeting.)<br><br>- Differences in the conditions of work (e.g. statutory responsibilities, the availability of time, personnel and other resources, whether they are operating a 'list' or 'patch' system can affect outcomes. | | |
| Bion (1961) cited in Harris (1999) | **4. Group dynamics**<br><br>- Group dynamics can have overt and covert influences on participants when they are given problems to solve.<br><br>- Participants may want to ensure the group's survival and so establish group norms and agree to decisions to fit the norm.<br><br>- Participants will also be anxious of having their own needs met. | Easen et al. (2000) | - Continuity of personnel over time. |
| Easen et al. (2000 | **5. Culture issues**<br><br>- Differences in conceptualisation between professional groups can hinder collaboration.<br><br>- Cultural differences (E.g. head teachers spoke | Davis et al. (2001, cited in Dalzell et al. 2007) | - Professionals have a solid understanding of each others roles as well as their own so that they provide co-ordinated and efficient services.<br><br>- Support and training for staff in new ways |

| | | | |
|---|---|---|---|
| Easen et al. (2000)<br><br><br><br><br><br>Easen et al. (2000) | of the conflicts between themselves - with their desire for rapid solutions to the immediate problems of the individual child and social workers expectation of working over a longer period of time with family units)<br><br>- Perceived status of different professional groups | Sloper (2004)<br><br><br><br>Sloper (2004) | of working, a multi-agency steering group, good systems of communication and information sharing, including information technology.<br><br>- Evidence that inter-professional programmes of continuing education can help to remove barriers to joint working. |
| Easen et al. (2000) | **6. Communication issues**<br><br>- Poor communication/ breakdown in communication between professionals. | Easen et al. (2000)<br><br>Leadbetter (2007)<br><br>Carter et al. (2007)<br><br>Dalzell et al. 2007) | - Strong personal contacts with colleagues in other services and an expectation of participating in collaborative ventures.<br><br>- Identify key players within multi agency work in terms of what their positions and perspectives entail.<br><br>- Importance of human relationships such as, dialogue, trust, respect, sharing, involvement, information exchange, flexibility and choices.<br><br>- Tools to facilitate communication e.g. The Family Needs Survey, which has been used in a multi-agency context in West Cheshire. |

| | | | |
|---|---|---|---|
| | **7. Number of professionals involved** | Dalzell et al. 2007) and Sloper (2007) | - Co-ordinated services with key workers. Evidence suggests that this method of multi-agency working provides a better quality of life, better access to services and less stress for families with disabled children (Sloper 2004). |
| Carter et al. (2007) | - The National Service Framework (NSF) Department of Health (DoH) & Department for Education and Skills (DfES) 2004a, Standard 8, p. 39) refer to families being involved with an average of 10 different professionals and making over 20 visits per year to hospitals and clinics. This can be overwhelming and confusing for children and their families. It can also be difficult for parents to understand how services relate to one another. | Davis et al. (2001, cited in Dalzell et al. 2007) | - Professionals have a solid understanding of each other's roles as well as their own so that they provide co-ordinated and efficient services. |
| Dalzell et al. 2007) | - There can be overlap in the services involved with the family and the role of the professional (e.g. the role of a speech and language therapist advising a family about communication issues and a specialist teacher also offering this service). | Carter et al. (2007 | - Parents have the opportunity to be linked with other parents in similar circumstances to facilitate mutual support and sharing of experiences. This may help parents to understand how professionals relate to one another and also help them to cope with the number of professionals they will see. |

Table 1.0 suggests that key barriers to effective multi/inter agency work may be a lack of conceptual frameworks and systems, differing service priorities, beliefs and protocols of services and professionals, the effect of working in a group, cultural issues, breakdowns in communication and the large number of professionals involved in multi/inter agency work.

Salmon (2004, see Table 1.0) notes that multi-agency work has not been adequately conceptualised. The following section will demonstrate how Activity Theory (AT) can be used as a conceptual framework and applied to EP casework that involves multi/inter-agency working. It is hypothesised that AT will be useful in aiding reflection on pertinent elements within the casework

## 5. Activity Theory (AT)

Leadbetter (2005) writes that Soviet researchers gave the study of activity an important focus in psychology and explains that it is used around the world to aid understanding of human activity. However, Leadbetter, Daniels and Stringer (2005) write that even though AT is rooted in Vygotskian and post-Vygotskian psychology and so should be familiar to most practising psychologists, it is more widely used in fields of sociology, linguistics and political theory.

Leadbetter (2005) points out that definitions of AT and understanding about its roots, functions and underlying beliefs are debated today. Wertsch (1998 p.3) explains that;

> The goal of a sociocultural approach is to explicate the relationships between mental functioning, on the one hand, and the cultural, institutional, and historical situations in which this functioning occurs, on the other.

Thompson (2004 p. 583) adds that;

> Activity theory is less a 'theory', in the sense of a well-defined approach and set of constructs, than an explicit focus on the interaction between actors and their surrounding environment, which accepts that activity is socioculturally constructed but maintains that much of the meaning available within any one particular context is determined in relation to the 'Activity Systems' in which it is embedded.

Waycott et al. (2005, p.111) agree, writing that AT is 'a collection of broadly defined concepts that are open to interpretation.' Thompson (2004) stresses the importance of examining the culture in which activity takes place and making explicit the actions of those involved in the Activity System. Leadbetter (2005) goes on to explain that AT approaches emphasise the importance of historicity and deem this important in understanding how practices have evolved and learning has taken place.

Miller (1991) considered it important that professionals were able to access and share their thoughts during problem solving activities. He wrote that professionals would need to be in a 'conscious and stated' mode. This means they would need to be conscious of what they were thinking and be able to share this understanding with others. This is something which AT may support as Edwards and Fox (2005) explain that Vygotsky sought to produce a methodology which allowed people to access consciousness. Daniels (2005) explains that there is now a growing interest in sociocultural theory (SCAT) and AT which he describes as 'near relatives' both linked by Vygotsky's work. SCAT emphasises semiotic mediation, particularly speech. Daniels (2005) explains that speech is considered, a cultural artefact that serves as a tool to shape thought and action. He explains that with AT it is activity, which is emphasised. He goes on to rationalise that both approaches investigate the processes through which social, cultural and historical factors shape human functioning.

## 5.1 Models of Activity Systems

Engestrom (1999) describes the development of AT in terms of three generations.

1. The first generation is Vygotsky's mediational triangle which exemplifies how minds engaged with the world. At the base of the triangle, to the left, was a subject(s), which could be an individual, dyad or group. At the other end of the base was the object or motive that lead to an outcome(s). Finally, at the top of the triangle were mediational means or tools such as machines, speaking, gesture and music. Edwards and Fox (2005) report that Vygotsky recognised that the use of tools was shaped in and by the culture they were used in, which in turn was shaped by history. He also found that the contexts in which people operate affected their thinking and their choice of tools.

2. Figure 1 exemplifies the second generation Activity System. This system emphasises the study of artefacts and mediation (tools and signs). It also introduces 'rules', 'community' and 'division of labour' to the base of the triangle. These elements can be thought of as contextual, cultural and historical factors (Leadbetter, 2005). This generation of AT expands on the first generation by incorporating macro level analysis, which emphasises collective and communal factors. Therefore, this generation emphasises interaction between various elements and the change which takes place between subjects and objects.

3. The third-generation endorses that all Activity Systems are part of a network of systems, which together constitutes human society. (Roth and Lee, 2007) Therefore, the third generation Activity System involves taking account of multiple perspectives and incorporates networks of two or more Activity Systems. Objects in the systems may be different but linked in some way. Leadbetter (2005) explains that through close analysis of the two systems a new object may come to light.

## 6. Case study example

The case study focuses on aspects of EP casework for a pre-school child with complex individual needs. The work described in this case study involved different professionals working for the same agency (multi-agency) and also professionals who worked for different agencies (inter- agency). All the professionals had differing knowledge bases (although there may be overlap) and so are from various disciplines.

If Doyle's (1997) definitions are to be used, the model of working for this casework involved inter-disciplinary working. Recommendations were discussed; however, as well as professionals carrying out assessments in parallel; they were also carried out together. Therefore, there were elements of trans-disciplinary working, where different agencies worked together, sharing aims, information, tasks and responsibilities. In short, the casework involved multi and inter agency work and the model used to describe the working style was largely inter-disciplinary with some elements of trans-disciplinary work. The second

generation Activity System (Engestrom, 1999) was used to help the TEP conceptualise the casework.

### 6.1 Children with complex individual needs

Carter et al. (2007) explain that the term 'children with complex health needs' encompass a diverse group. They explain that this group often need physiological, psychological and social care input which results in their families and themselves coming into contact with a wide range of health, social and education professionals as well as people from other agencies. Dalzell et al. (2007) agree, stating that provision for children identified with a disability is multidisciplinary as does Sloper (2004, p.157) who explains that;

> Children with complex problems do not necessarily fit neatly into the health, education and social services categories into which we divide our service even if they did no one professional discipline can now be expected to have the knowledge and the skills required to deal with them.

These statements clearly indicate the need for multi/inter agency work for children with complex needs.

### 6.2 Formulation of needs

X was 3 years and 4 months old when the TEP first met him. He was referred to the local authority pre-school liaison panel and consequently referred to the Educational Psychology Service (EPS) and allocated an EP. X lived in his family home with his biological mother and father. X spoke English and understood Miripiri, which was often spoken in the family home.

X did not speak Miripiri. His father and 2 older siblings have the same medical diagnosis (see below).

X's referral form indicated that he was born 9 ½ weeks prematurely and had a low birth rate of 1.24 kilograms. His priority concerns, as identified on the referral form, were medical difficulties and developmental delay. The medical difficulties he had were familial nemalin myopothy, reflex anoxic seizures, conductive hearing loss and constipation.

Nemaline myopothy is a rare inherited neuromuscular disease that is congenital and characterised by extreme muscle weakness (Bagnall et al. 2006). As a result X had gross motor difficulties, his muscles were very weak and his bones were prone to breaking. Weak muscles in his throat meant that he had difficulties with his swallowing reflux and so received all liquids from a nasal tube. X's hearing was being monitored because he recently failed a hearing test. He suffered with glue ear. X also suffered from reflex anoxic seizures, which Blackmore (1998) describes is caused by a brief cardiac arrest that occurs in response to sudden shock. During seizures X's mother reported that his body became rigid, his mouth clenched and he became very pale. He would stop breathing for between one to two minutes. Blackmore (1998) report that seizures are not life threatening and children recover without medical intervention.

X lacked age appropriate independence skills, for example, he was not toilet trained. This seemed to be because he was often severely constipated an effect of his medical condition. Assessments made by the TEP and the specialist teacher showed that he had speech

difficulties. He was wary of strangers and reluctant to interact with unfamiliar people. X had recently broken his right arm and showed some fine motor difficulties.

The referral form named a number of professionals who were involved with X. These included a doctor, health visitor, three consultant paediatricians, a speech and language therapist (SaLT) and a physiotherapist. Soon after he was referred to the pre-school liaison panel he was allocated a specialist teacher for learning.

### 6.3 Methodology

Cohen et al. (2000) describe ontological assumptions as being concerned with how social reality is perceived and comprises part of the nominalist-realist debate. The nominalist view holds that reality is created by one's own mind and is the product of individual consciousness whereas realists believe that reality is external to individuals and that it has an independent existence. Nominalist ontology seems to fit well with the use of AT in this PPR as it was the TEP's individual consciousness that was being explored.

### 6.4 Method

The second generation Activity System (Engestrom, 1999) was used to conceptualise complexities involved in the casework. The justification for choosing the second generation Activity System was because it was not possible for the researcher to work at length with other stakeholders in order to structure multiple Activity Systems. In addition, the second generation Activity System was judged to be sufficient because as Leadbetter (2006) writes,

from second generation Activity Systems different aspects of working practice and relationships between elements in the system can be scrutinised.

Engestrom (1993) outlines three methodological principles of AT:

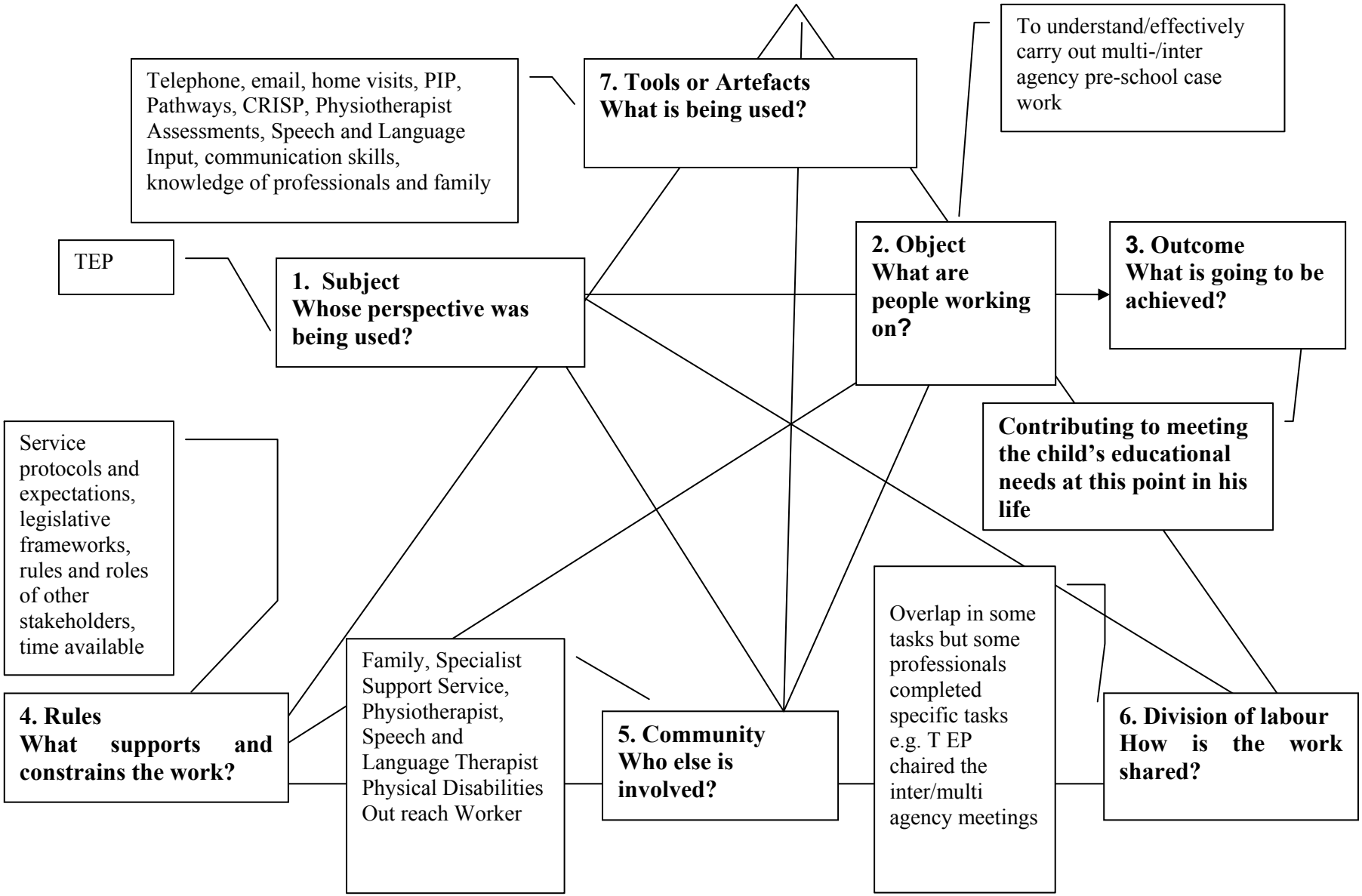
1. The collective Activity System is used as a unit of analysis
2. Internal contradictions are searched for because they are considered the driving force behind disturbances, innovations, and change within the Activity System.
3. The activity its components and actions will be considered historically.

These overarching principles were used to analyse elements in the Activity System.

Figure 1 exemplifies key elements which constitute the Activity System. To supplement the system and aid understanding of the interplay of elements a set of basic questions were used. These were taken from Leadbetter et al. (2007) and are illustrated in Figure 1 below.

Waycott et al. (2005) point out that there is ambiguity in AT literature concerning the distinction between the subject of the activity and the community. They stress the importance of clarifying these terms. The author also deemed it important to clarify how other terms were construed; remembering that Waycott et al. (2005 p.111) write that AT consists of 'broadly defined concepts that are open to interpretation'. Key terms as conceptualised in this PPR are defined in Appendix 1.

**Figure 1: The Activity System generated from the casework**



## 7. Activity Theory in praxis: using an Activity System to structure thinking

### 7.1 Subject: whose perspective was being used?

The TEP brought to the Activity System her own conception of what multi/inter agency working should involve. This was based on teaching from her doctoral programme in educational and child psychology and her previous experiences of working with different professionals to meet children's needs.

The TEP's doctoral training had instilled in her the theoretical importance of multi/inter agency work. Academic culture had promoted inter/multi agency work and her prior experiences of multi/inter agency working were that it could be beneficial for the child because other professionals could support her thinking with their own unique set of skills. She, in turn, could support their thinking with the skills she had, specifically her knowledge of child development, school systems and her psychological knowledge of working with families, children , schools and multiple systems.

Therefore, the TEP aimed to work in co-ordination and collaboratively with other agencies. She hoped to engage in joint activities and share resources. Using the definition discussed by Walter and Petr (2000), this meant she wanted to develop formal relations between agencies by sharing plans but realised that she had her own service priorities to maintain, a barrier to multi-agency working identified by Easen et al. (2000, see Table 1.0).

Contradictions existed between her ideal way of working and prior experiences of multi/inter agency work. For example, historical experiences informed her perception that multi/inter agency working could be challenging because it involved liaising with numerous people. This could be time consuming. Also, as Easen et al. (2000, see Table 1.0) found, communication between professionals could be difficult. The TEP had previously found that key professionals involved in case work were based in different settings and could not always be contacted when needed.

### 7.2 Object: what are people working on? What is the motive?

The TEP was working on understanding how multi/inter agency work occurred in praxis. She wanted to ensure that she carried out multi/inter agency work effectively in terms of meeting service expectations and also in ensuring the needs of the child were met.

### 7.3 Outcome: what is going to be achieved?

The TEP wanted to meet X's educational needs at this stage in his life and she understood that this could best be achieved through activity involving inter/multi agency work. Examples of activities included ensuring that appropriate individual education plans were created that involved X's family and other agencies. Another anticipated outcome was to come to a decision about whether a Statement of Special Educational Needs (DfES, 2001) was needed.

### 7.4 Rules: what supports and constrains the work?

Reflection on rules focused thinking about what supports and constrains work and included thinking around issues such as the time available to complete work, legislation and service requirements.

The TEP was aware of some service protocols in terms of pre-school work. For example, she knew she should instigate pre-school work by making contact with the family within a specific number of weeks of referral, observe the child in various settings and ensure stages of the SEN Code of Practice (DfES, 2001) were applied systematically and thoroughly. However, the TEP was not a qualified EP nor had she carried out multi/inter agency work in her current setting because she had only recently been employed as a TEP. Therefore, systems, procedures and expectations in terms of pre-school and multi/inter agency work were new to her.

Importantly, using the Activity System to reflect on rules in the system helped the TEP to ask questions about service expectations and protocols, which may have been missed. Questions that may seem basic to more experienced EPs, such as the time it takes for a Statutory Assessment (DfES, 2001) to become formalised and the paper work needed to be completed at each stage of involvement were thought about. Conceptualising this in terms of multi/inter agency work meant that the TEP had to consider who she would need to work closely with, at what points in time and for what purpose.

Thinking about constraints was centred on time available to accomplish tasks. The TEP worked for three days in the service. This had implications for liaising with other professionals because days of work differed. Thus, making contact with professionals potentially challenging. Supporting factors, from the TEP's perspective, were that she was able to manage her case work with some autonomy; there were not too many rules governing the number of times she was supposed to visit the child.

Cultural influences also had to be considered within an AT framework. In the service there seemed to be a reluctance to use standardised forms of psychometric tests. Perhaps as a result of this cultural and possibly historical rule there were not many standardised assessments available. This rule consequently impacted on what tools the TEP could engage with. In addition, this unspoken and unendorsed 'rule' made the TEP reflect on whether she should, in any case, be seeking to use particular types of assessment tools. Thus, it can be seen that the rules in the system influenced her choice of tools.

When reflecting on rules which governed her own way of working the TEP realised that she had limited knowledge of the rules supporting and constraining other agencies involvement with the child. This lack of awareness of other agencies' rules constrained her thinking. A number of questions were generated such as were there expectations on the amount of contact they should have with the child? Should they be present at review meetings or contribute in particular ways to individual education plans?

Leadbetter (2005) writes that AT approaches value historicity because this helps with understanding how practices have evolved and how learning in the past can influence the

future. Therefore, in keeping with AT principles of cultural and historical influences, did other professionals think the TEP should be abiding by particular rules or acting in specific ways? What were their expectations of her role and how had these been informed by history and culture from other professional's perspectives? Reflection on elements within the Activity System prompted the TEP to raise these types of questions with her supervisor, who was an experienced EP.

### 7.5 Community: who else is involved?

The community element of the Activity System prompted the TEP to think about X's immediate and extended family as key stakeholders in the community. The child had a complex genetic condition, which his two older siblings also experienced. This meant that X's mother was very knowledgeable about his condition and the difficulties which he encountered because of it. She was able to identify some key players who were regularly involved with the child such as the name of her local doctor and a new physiotherapist.

Some of X's difficulties were physical and were experienced more severely in unfamiliar settings. However, as he was not attending Nursery or regularly visiting other settings it was difficult to observe him in different settings. Therefore, the mother's role in describing X's difficulties and contributing to the professional's understanding of the impact they had on X's life was deemed to be important.

From reflecting on the importance of X's family's role an activity for the TEP emerged. This was to help the mother feel comfortable so she could share her insight with other

professionals during multi/inter agency meetings. This activity may appear to be 'good case work practice' but for an inexperienced TEP who does not have experience of multi/inter agency work the Activity System proved useful in encouraging reflection which drew out good practice. The TEP realised she needed to use good communication skills as a tool to facilitate the activity. It can also be noted, that as well as X's mother being a member of the community her knowledge could be interpreted as a tool, which helped to mediate professional's activity.

The TEP found that her supervisor, although not directly involved in the community, was a part of it because the TEP used discussions (a tool) with her supervisor (another tool) to mediate activity. Therefore, these discussions bought the supervisor into the community. During discussions about X's individual difficulties, other professionals in the community who may need to know about him and were not included on the referral form were brought to light. The TEP was told about outreach workers for physical difficulties that covered patches of schools. Using this information she was able to find out the name of the outreach worker for the school X would be attending and arrange for her attendance at a review meeting.

From discussions with her supervisor the TEP gained understanding of how to manage the community of professionals involved with X. For example, she gained the impression that historically and culturally the EPS had good relationships with the Specialist Support Service (SSS), who are made up of specialist teachers for hearing impairment, learning and visual impairment. Culturally, it seemed that a first point of contact for EPs, after receiving a referral, would be the SSS worker assigned to the child. The TEP followed this method

of working by making contact with this stakeholder. As well as using the referral form, which highlighted some professionals who were involved with the child, discussions with the SSS proved useful in identifying other key players involved with X and thereby extended the community.

To summarise, this element of the Activity System helped the TEP to think about who key players were and what they could contribute to meeting X's needs at this point in time (the desired outcome). As well as the referral form, verbal communication with professionals, the family and the TEP's supervisor was an important tool which allowed actions to be mediated, because through communicating with stakeholders key players in the community were discovered. In addition, through reflecting on who the community was made up of enabled the TEP to gain an understanding of what tools specific to other agencies could be used to mediate activity. This will be discussed in section 7.7.

**7.6 Division of labour: how is the work shared?**

The DCSF (2008) interim report on the review of services for children and young people with speech, language and communication needs (SLCN) indicates evidence of significant variations in the combination of expertise in multidisciplinary teams and, therefore, in the subsequent model of service delivery.

Leadbetter (2005) comments that the division of labour in relation to multi agency working may be particularly relevant where there may be expectations concerning joint targets and common assessments.

The TEP felt that because there was a wide range of professionals working with X it was important that they came together to share information, assessments and communicate what X's needs were and how these could be met. From her perspective, this would help ensure that the team included a combination of experience and expertise, helping professionals to work together to best meet X's needs. This was supported by service protocols ('rules') which indicated that a range of professionals should come together at specific points in casework such as review meetings. It seemed important to think about how activity generated from such meetings would be shared.

Leadbetter et al. (2007) write that in order to take account of contexts and their constraints professionals must take account of historical relationships and practices governing how work is traditionally divided and allocated. In terms of the division of labour each professional appeared to have designated roles although there was some overlap in roles, supporting Dalzell et al. (2007 see Table 1.0). For example, the specialist teacher assessed learning and development as did the TEP. Other professionals seemed to work within specific remits, for example the physiotherapist concentrated on stability and mobility issues and the SaLT was designated to work with X's receptive and expressive language and his swallowing reflux.

It seemed that culturally and historically the EP chaired many multi/inter agency meetings. This meant that the TEP had to have a sound understanding of what tools were required to mediate this activity, such as knowledge of referral procedures and review forms.

Constraints were identified when the TEP attempted to organise an inter agency meeting to review X's progress. This was, from the TEP's perspective, an important meeting, as decisions would be made concerning whether X was going to be referred for a Statutory Assessment of Special Educational Needs (DfES, 2001).

The TEP was successful in arranging for the specialist teacher and the out reach worker to be present at the meeting. However, it was difficult to make contact with the SaLT. The TEP discovered from other members of the community (the family and specialist teacher) that the SaLT was absent from work on long term sick leave. The TEP in keeping with rules governing her own service assumed that X's case would be covered by another member of staff. Therefore, she telephoned several settings to locate the SaLT who had taken X onto their case load.

During this process constraints in the tools used by the TEP were identified. For example, the referral form indicated the names of some professionals involved with X but did not always state where they were based or their contact information. This hindered the division of labour and because extra time was being devoted to 'chasing' professionals.

The DCSF (2008) review also found that parents experienced difficulties in obtaining information. This document indicates that parents felt that there was no formal or coordinated system to provide them with information and they had difficulty locating the right person or department to contact.

Once the SaLT had been located more time was spent leaving telephone messages that were not returned. When the TEP made contact with the SaLT she informed her of the review date, explaining that it would be useful if she could contribute to the review given her specific knowledge of X's difficulties.

This conversation proved difficult. The SaLT stated she was not responsible for input in relation to X's feeding difficulties, rather she had observed his general speech and language development, which she was not concerned about to any great degree. This conflicted with assessments made by the TEP and the specialist teacher. Thus, adding a constraining factor within the Activity System. One way of resolving this constraint would have been to gather assessment data and analyse it in terms of what aspects of X's speech and language assessments concurred and differed.

However, the SaLT stated she was unable to attend the review and unable to forward on her observation or assessment records because of time constraints. The SaLT felt unable to put the contents of the telephone conversation, in terms of her deeming X's level of speech and language to be approximately age appropriate in an email correspondence. This could have been used at the review meeting in her absence. She stated that service protocols relating to confidentiality issues when using internet facilities to transmit client information prevented her from sending an email. The SaLT's general attitude to engaging in inter-agency work seemed to differ from the TEP's. She appeared reluctant to share 'labour' in terms of attending the review or sharing the assessment data she had gathered.

The TEP, because there was no clear guidance (rules) on whether the SaLT was expected to contribute to the review or share information with other agencies, found the telephone conversation challenging. From the TEP's perspective because she was new in post she felt she did not know enough about the rules of engagement between EPs and SaLTs to insist on particular actions. The inability for the SaLT to attend the review and apparent reluctance to share information seemed to be, from the TEP's perspective, a constraining factor to inter-agency co-operation and collaboration.

Using the guiding principles of AT it would be important to reflect on why these constraining elements were manifesting themselves. Perhaps there were cultural and historical issues that the TEP was unaware of? These factors needed reflecting on in order to think about ways to overcome these barriers.

Easen et al. (2000), see Table 1.0, discuss culture issues which can hinder inter-agency collaboration particularly differences in conceptualising who is involved and what their responsibilities are. They note that conditions of work may also affect professional's work. It was discovered that political issues in the current climate may have impacted on the SaLT's attitude. For example, The DCSF (2008) report highlighted significant differences in the numbers of SaLTs per population and the caseloads for SaLTs. It pointed out that in one city there may be 10 SaLTs for 2,500 children and young people, whereas in another area there may be 21.4 SaLTs for 3,000 children and young people. In an area with 10 SaLTs concerns were raised that the needs of children and young people with SLCN were not being adequately met.

The DCSF (2008) review also noted that parents gained the impression that health and education staff were apprehensive in providing information because to do so would add to the demand on their time and resource. Thus, a shortage of SaLTs in the area may have possibly contributed to the SaLT's reluctance to engage in inter/multi agency work because she felt time pressured and overburdened.

From reflecting on the telephone conversation between the TEP and the SaLT it could be interpreted that the SaLT was using a tool, her language and communication style, when she was conversing with the TEP. She successfully avoided becoming an active member of the community in terms of the review meeting and also avoided becoming involved in the division of labour. This may have mediated activities in her own system enabling her to devote her attention to work she deemed more pressing or to her own services priorities (See Barriers from Young et al. 2005 and Easen et al. 2000 in Table 1.0.)

Other constraints in this part of the Activity System were also reflected on when thinking about the division of labour. For example, it was not made clear to the TEP who was responsible for assuming a key worker role and therefore enlisting attendance of professionals at review points. Carter et al. (2007) summarised in Table 1.0 note that often unofficial key workers were created in the course of multi/inter agency work because they were going to have frequent and longstanding contact with the family. In this case a key worker was not identified to the TEP. Therefore, she assumed the role of contacting professionals to attend the review because she would be responsible for administering paper work when/if a statutory assessment was requested.

The TEP realised that contradictions to effective multi/inter agency work transpired from cultural and historical influences which were embedded in her self consciousness. The TEP seemed more reluctant to approach some professionals such as the Consultant Paediatrician. From reflecting on these nuances of behaviour this lack of activity may be because she felt less powerful and more anxious about approaching this type of professional (Miller et al. 1993, see Table 1.0) or that she had made the assumption they would not attend the review meetings. These feelings/attitudes may have stemmed from the fact that she was new to the service, unsure of protocols and had limited experience of communicating with these kinds of health professionals.

Identifying constraints in how work was divided and shared highlighted difficulties with multi/inter agency work, which seem to stem from a lack of explicit guidance (rules), a lack of conceptual frameworks and structures (rules) and differing attitudes or cultures (community/subject's perspectives). These constraints to multi/inter agency work concur with barriers identified by Salmon (2004), Young et al. (2005), Easen et al. (2000) and Harris (1999) that were summarised in Table 1.0.

### 7.7 Tools: what is being used to mediate activity?

Leadbetter et al. (2007) stress the importance of understanding what tools are used as part of professional's practice. They state it is important to pay attention to whether they concur with those used by other professionals. Waycott (2005) write that evaluation of tools should examine how well the tool supports the user's activities.

A number of tools have been identified in the course of this case study. Namely these have been email, telephone and meetings with various stakeholders. These communication tools mediated activity in order to achieve the object and outcome. Sometimes some of these tools proved to be ineffective, for example the SaLT chose not to transmit information via email as she deemed this unsafe in terms of client confidentiality. The referral form was a tool which could have been improved on as missing information affected division of labour and community aspects because the TEP was not able to quickly identify members of the community and was unable to quickly reference professional's bases.

Letters from paediatricians were forwarded to the EPS and placed in X's file. These letters, helped to mediate activity, because they supported the TEP's understanding of X's medical difficulties and informed her activity in terms of thinking about what assessments she may need to carry out to understand how X's difficulties may affect his learning and progress in educational settings.

In some instances tools complemented each other, the 'Criteria for Special Provision' (CRISP) (Birmingham City Council, 1999) tool was used by the TEP, the specialist teacher and the outreach worker. A PIP developmental chart (Jeffree and McConkey, 1998) was used by the TEP. It focused on 'milestones' of development in five main areas: physical development, social development, eye-hand development, development of play, and language development. The specialist teacher completed a Pathways Birth to Three Years Assessment (Birmingham Specialist Support Services, 2002) assessment. This tool also provides a summary of developmental skills and milestones, covering similar detail as the PIP assessment (Jeffree and McConkey, 1998). In this instance the tools complemented

each other and provided a broader picture of X's abilities and needs. However, it is possible that in other instances similar assessment tools may lead to a duplication of effort.

Other tools such as completing individual education plans were used in this piece of casework as well as review forms for particular stages. These forms facilitated multi/inter agency work as they asked for the views of a range of professionals involved with the child.

The use of tools was influenced by culture and history. For example, the specialist teacher used the Pathways assessment which was devised by her service. The PIP was recommended to the TEP by her supervisor who informed her that it was a tool often used by EPs. The CRISP was a tool which was developed by the Local Authority, which the specialist teacher and TEP worked for.

As noted above, the tools in this case study complemented each other. However, it is hypothesised that the introduction of a new tool, for example the SaLT assessment, may have modified the Activity System either resolving or creating contradictions between different components in the system. These would need to be resolved in order for learning to take place and the Activity System to evolve.

## 8. Discussion

When using the Activity System to reflect on casework, contradictions which map on to some complexities of multi/inter agency working summarised in Table 1.0 were identified.

Specifically these were differences in conceptualisation of the work, difficulties with communicating with professionals (Easen at al. 2000) and differing service priorities (Young et al. 2005, Easen et al. 2000) in this instance exemplified by the SaLTs refusal to attend the review meeting.

The TEP was able to use the Activity System to take account of specific units of activity but it also proved fruitful to regard the system as a whole, especially paying attention to how elements impacted on each other. Thus the system was useful in structuring thinking and identifying key elements such as members of the community, tools and rules that would be involved in meeting the Activity System's outcome. AT prompted understanding of cyclical elements in the system in the way that parts of the system influenced each other. For example, the people involved in the community brought their own tools to it and members of the community impacted on the division of labour.

AT was also useful in promoting consideration of communities, in this case study the family and other professionals working with the child. The Activity System caused the TEP to consider the community's value structures. This can be seen when the TEP sought to engage the SaLT and found this problematic. This prompted her to consider factors which may have contributed to the SaLT's value stance, these potentially being a lack of SaLTs or the amount of work they had to manage in their locality (DCSF, 2008).

In terms of the usefulness of AT in aiding conceptualisation of multi/inter agency casework, the model fits well with the problem solving role of EPs (Harris, 1999) because contradictions in the system were highlighted to the TEP. The system allowed the TEP to

make explicit (in her mind) what the contradictions were, the effect they had on other elements of the system and how they could impact on the object and outcome. For example, the rules element helped to make explicit factors that supported and constrained the system. In this instance constraining factors seemed to be the lack of knowledge the TEP had about how other roles/agencies, specifically the SaLTs, were influenced by their own rules. Thus, using AT promoted consideration of possible contradictions that prevented the system working smoothly.

Clarity gained from using the Activity System could be used to help facilitate problem solving conversations with multi/inter agency colleagues. This would involve thinking about solutions to resolve contradictions in partnership with stakeholders. This could lead to change. In terms of pre-school case work this is important as it can involve multiple actions and activities over a period of time, for example from referral until the child attends school.

All the factors described above point towards AT's ability to promote access to consciousness in a structured way (Edwards and Fox, 2005). However, as well as illustrating the usefulness of AT, it is important to consider its limitations in the context of this case study example.

The definitions of AT discussed earlier in this report implied AT is a collection of ideas and approaches to assessing how changes in systems are influenced. The concepts are open to interpretation. In this case study, at times, key terms seemed to overlap. There seemed to be a lack of distinction between rules and tools. For example, the kind of language used by

the TEP may be an implicit rule of the service, in that it is child centred and diplomatic. This activity may also be a tool, which is used to mediate activity, in terms of communicating with members of the community. Lack of clarity in what terms mean and overlap between elements in the system can be confusing.

Another limitation of AT is that it offers a descriptive framework. It does not have a concrete method and does not provide solutions to contradictions that are discovered. Even thought this is understandable because Activity Systems can be used in any number of situations, it does mean that the user must strive towards independently discovering solutions.

Thompson (2004) explains that analysis of Activity Systems adopts a historical perspective. In this case study it was difficult to reflect historically on elements within the system because the TEP was new to the service and the educational psychology profession. Comments from stakeholders which may have been steeped in history could have been missed because the TEP was unaware of pertinent events or changes to structures and routines that had occurred before she joined the service. In order to focus on historical influences research or discussions with more experienced colleagues needed to take place. This may prove to be impractical and time consuming.

If AT is used as a "thought exercise", as it was in this case study, it is dependent on the user's ability to reflect. In this instance questions taken from Leadbetter et al. (2007) were used to assist reflection. The theory does not seem to provide methods of engaging in systematic reflection.

In this instance the second generation Activity System prompted thinking. However, reflection on elements in the system was, in totality, from the TEP's perspective. One way of broadening perspectives would be to apply the third generation Activity System. This would involve establishing a network of Activity Systems. As many stakeholders as possible would engage in using an Activity System so the network could take account of varying perspectives and identify a range of contradictions.

The third generation Activity System could help stakeholders verbalise a range of issues such as what their service priorities are, constraining factors and supporting factors. This could possibly go a long way towards helping professionals gain a solid understanding of each others roles and assist in establishing co-ordinated and efficient services. A facilitating factor to effective multi/inter agency working identified by Davis et al. (2001, cited in Dalzell et al. 2007). Stakeholders would need to work together to develop the Activity System, through solution finding work, so that the desired outcome(s) could be obtained.

## 9. Conclusion

This case study has added information which Easen et al. (2000) deemed necessary. It has used a conceptual framework to describe what happens when professionals work together. This case study example also illustrates that there are barriers/contradictions to multi/inter agency working and that some of them concur well with barriers, which were found in a review of multi/inter agency literature. (See Table 1.0), Solutions to these

barriers/contradictions are not explicitly provided through the use of the AT framework, rather as Edwards and Fox (2005) suggested, contradictions are brought to consciousness.

The next challenge to achieving effective multi/inter agency work would entail seeking out ways to share consciousness of supporting and constraining factors with colleagues. This sharing of consciousness may lead to a collective search for solutions. It is suggested that using the third generation Activity System could be one means of achieving this.

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## APPENDIX 1: Definitions of key terms as conceptualised in this PPR

1. Contradictions: Kuuti (p. 34, 1996) cited in Waycott et al. (2005) describes contradictions as 'problems, ruptures, breakdowns, clashes.' Waycott et al. (2005) propose that there are always contradictions in an activity system, and even though they are disruptive they are necessary for the development of the activity because activities evolve through the introduction and resolution of contradictions.

2. Activities consist of specific goal-directed actions. Actions are achieved through the use of available tools, which represent the 'conditions' of the activity.

3. The subject was the TEP. It was her perspective which the activity system took into account and the system was a tool to facilitate her thinking.

4. The object was to understand and engage in effective multi/inter agency work.

5. The outcome was to meet X's educational needs at this stage in his life.

6. The rules in the activity system consisted of formal laws, protocols, and historical methods of carrying out tasks and procedures; as well as informal and implicit ways of doing things.

7. The community represented other stakeholders involved in the multi/inter agency work. These were the Specialist Support Service, an outreach team who specialised

in physical difficulties, a physiotherapist and a speech and language therapist. The child's family were also key stakeholders in the community.

8. The division of labour was interpreted as how the work was shared and refers to 'both the horizontal division of tasks between the members of the community and to the vertical division of power and status' (Engestrom, 1993 p. 67).

9. The tools and artefacts referred to what was used by the TEP to mediate the activities she carried out and also what she considered was needed from other stakeholders to help her mediate her activities.

# CHAPTER THREE

# A CRITICAL REVIEW OF GROUP BASED COGNITIVE BEHAVIOURAL THERAPY INTERVENTIONS FOR CHILDREN AND AN ILLUMINATIVE CASE STUDY EXPLORING PROGRAMME PARTICIPANTS' VIEWS OF FACTORS IMPEDING AND FACILITATING A COGNITIVE BEHAVIOURAL THERAPY GROUP INTERVENTION

## ABSTRACT

This Professional Practice Report (PPR) suggests that it is important for Educational Psychologists (EPs) to reflect on how they can work preventatively to support mental health in children. It proposes that Cognitive Behavioural Therapy (CBT) in a group school based context can be effective in meeting the needs of children at risk of developing mental health difficulties.

The PPR critically reviews 4 school based CBT interventions and argues that previous CBT evaluations have not systematically explored what aspects of the intervention were effective from programme participants' perspectives. To extend previous research, an illuminative single case study design was used to qualitatively explore factors which impede and facilitate a school based CBT intervention from programme participants' perspectives. In order to gain participants' views two qualitative methods: 'The Ideal Self' technique (Moran, 2001) and aspects of Realistic Evaluation (Pawson and Tilley, 1997) which have not been used previously, in the context of CBT evaluations, have been trialled.

Results showed that following the CBT intervention all participants considered they had moved closer to the 'person they would like to be' (Moran, 2001). Moreover, using aspects of Realistic Evaluation (Pawson and Tilley, 1997) allowed participants to identify factors inherent and external to the intervention which facilitated and impeded their progress. Threats to the validity of the study, such as uncertainty about how to use qualitative data collection methods in an unfamiliar context, are discussed. The author concludes that

further research focussing on creating and evaluating trustworthy qualitative data collection methods to gain programme participants' perspectives is needed.

# A CRITICAL REVIEW OF GROUP BASED COGNITIVE BEHAVIOURAL THERAPY INTERVENTIONS FOR CHILDREN AND AN ILLUMINATIVE CASE STUDY EXPLORING PROGRAMME PARTICIPANT'S VIEWS OF FACTORS IMPEDING AND FACILITATING A COGNITIVE BEHAVIOURAL THERAPY GROUP INTERVENTION

## 1. Introduction

Timmins and Miller (2007) comment that Pawson and Tilley's (1997) Realistic Evaluation (RE) approach emphasises that people involved in an intervention are crucial in influencing it. They state that it is the unique characteristics that they bring to a situation, during their interaction with the intervention that causes it to work. It seems that if researchers are interested in finding out what facilitates or impedes an intervention from programme participants' perspectives they need to ask them and include such enquiry as part of the evaluation design.

A critical review of school based CBT group interventions for children (studies summarised in Appendix 2) shows that exploration of programme participants' views of factors which facilitate or impede their progress has not been carried out or reported systematically. Some studies, as demonstrated in section 3 of this professional practice report (PPR), have asked programme participants for qualitative information on their perspective of the programme but this has often centred on changes in themselves as opposed to aspects of the intervention such as its content or the way in which it was delivered.

The aim of this PPR is to systematically explore programme participants' views of factors which impeded and facilitated a mixed referral CBT group intervention. Humphrey and Brooks (2006) write that the knowledge base in regards to the evaluation of Cognitive Behavioural Therapy (CBT) interventions comes from quantitative rather than qualitative perspectives on the measurement of change. Therefore, in order to make an original contribution to knowledge, this study will trial a qualitative technique called 'The Ideal Self' (Moran, 2001) to gain programme participants' views of the intervention. Once data has been gathered aspects of Realistic Evaluation (RE) (Pawson and Tilley, 1997) will be used to code data so that programme participants' views of factors which facilitated and impeded their progress can be identified.

## 2. Evidence for the need to promote mental health in schools

The Office for National Statistics (2005) exemplifies the high number of young people who experience mental health disorders. It shows that in 2004 one in ten children and young people in Great Britain aged 5-16 years old had a clinically diagnosed mental health disorder and that boys were more likely than girls to have a mental health disorder.

The Department for Education and Employment (DfEE, 2001) provides examples of mental health difficulties. Examples of emotional problems are phobias, anxiety and depression. Conduct problems are exemplified by actions such as stealing, defiance, aggression and anti-social behaviour. Hyperkinetic problems are summarised as disturbing activity and attention. The guidance explains that children who experience emotional and

behavioural difficulties outside the normal range for their age or gender are at risk of experiencing mental health disorders.

It seems that a focus on preventative work is important if the number of children with mental heath difficulties is to be reduced. This is recognised by the government in the Every Child Matters Green Paper (DfES, 2003) which includes being mentally healthy as one of the five outcomes which Children and Young People's Services should strive for. The document discusses the importance of preventative work by advocating early intervention and integrated working across services to ensure that children's needs are met before they reach crisis points. The Children's Plan (DCSF, 2007) also emphasises the importance of emotional health and well being, stating that a review of Child and Adolescent Mental Health Services will take place to see how mainstream and specialist support services can be improved to meet the needs of children and young people with mental health needs.

The emphasis on mental health from recent government initiatives seems to have affected local authorities who are the employers of Educational Psychologists (EPs). Farrell et al (2006) write that local authorities are thinking about what individual services can contribute to achieving the Every Child Matters (DfES, 2003) outcomes. In view of the fact that the government and local authorities are thinking about how to promote positive mental health in children and young people it seems important that EPs, who regularly work with children in school settings, think about how they can make a distinct contribution. It is argued that by making use of an approach such as CBT, which is

grounded in psychological theory and evidence based research; EPs will be able to make clear the psychological contribution of their work.

### 3. Psychological theory underpinning CBT

There have been numerous influences on cognitive behavioural psychology and a summary has been provided in Appendix 1. Blackburn and Twaddle (1996, p2-3) proclaim Beck's (1967) model the 'cornerstone of cognitive methodology.' They explain that before Beck's (1967) model cognitive therapists focussed on the content of client's experiences by focussing on exploring what happened to them in different situations. This approach meant that issues of parsimony emerged because a multitude of different content and context dependent models were necessary to cater for the large range of client experiences.

Beck's (1967) tripartite model, which is described below, managed to overcome these limitations by focusing on a range of cognition levels. It distinguishes between automatic thoughts, faulty information processing and dysfunctional assumptions or schemata thus expanding on analysis of client's concrete experiences to incorporate detailed analysis of abstract thought processes. An adaptation of Campbell's (1989) definitions of automatic thoughts, faulty information processing and dysfunctional assumptions can be seen in Table 1.0.

| | |
|---|---|
| Automatic thoughts | Part of conscious knowledge which is not a result of logical thinking but occurs automatically |
| Faulty information processing | Information is distorted during its processing. Examples of faulty processing are selective abstraction, over generalisation, dichotomous thinking, labelling and mislabelling. |
| Schemata (Core beliefs) | Deep, relatively stable, fundamental beliefs about self and others that shape incoming data to fit and reinforce preconceived notions. They are considered to be unconscious and not the focus of attention. |

**Table 1.0 shows definitions of salient features of Beck's (1967) tripartite model (Adapted from Campbell, 1989)**

Stallard (2002b) writes that the overall goal of CBT is to increase self-awareness. He explains that CBT focuses on the interactions between what we are thinking (cognitions), how we feel about events (affect) and our resulting behaviours. Stallard (2002b) writes that CBT assumes that feelings and behaviours are a product of thought processes, and that through CBT changes can be made to a person's distorted thinking patterns resulting in changes to their feelings and behaviours.

Blackburn and Twaddle (1996) write that even though Beck's model (1967) attempted to address the complexities of thinking processes, it has been criticised for over simplifying processes. For example Beck's view that schemas activate when stressful events, similar to events that were happening when the schema was created, are taking place, has been challenged by Teasdale (1988). He argued that stressful events activate a wide range of schemas. They do not solely activate schemas which mirror the stressors that were happening at the time. Barnard and Teasdale (1993) raise the point that the relationship

between thinking and feeling is controversial, stating that there is uncertainty about which cognitive processes are involved in emotional experiences.

## 4. Core features and benefits of using a CBT approach

Research has identified core features and benefits of using CBT approaches with children and adults. Table 1.1 provides a synthesis of some of these.

| Research | Core features and benefits of using a CBT approach |
|---|---|
| Curwen, Palmer and Ruddell (2004) | • Shorter course of therapy than other therapies, for example psychoanalytic therapy<br>• Cost effective<br>• An alternative to prescribed drugs and their side effects<br>• Can be used in a group format |
| Simos (2002) | • Therapists can help children to alter their attributions about past events and therefore their expectations about events in the future |
| Stallard (2002b) | • Skilled approach based on theory and collaboration<br>• Focussed on present behaviours and experimentation<br>• Programmes typically include self monitoring, identification of cognitive distortions or maladaptive thinking, affective education, target setting and experimentation<br>• Techniques can be used to identify irrational thinking and core beliefs which may effect emotions and behaviour |
| Squires (2001) | • Pace of the therapy is brisk, task orientated and focussed on problem solving |

| | |
|---|---|
| Flannery-Schroedes, et al. (1996) | • Results from homework assignments can provide evidence that one's cognitive structures should not always be held as truth |
| Kendall (1993) | • Can assist children in developing new cognitive structures or modifying existing structures which they are using to process information<br>• Children will learn how they are currently thinking about events and appraising situations and practice new ways of thinking<br>• Can support children in constructing a coping template |
| Emery (1985) | • Brief and time limited |
| Mahoney (1974) | • Collaborative and experimental process which supports the client in becoming a 'personal scientist.'<br>• Once the therapist and client have agreed on how to conceptualise the problem the client searches for evidence to confirm or disconfirm the conceptualisation<br>• Weekly homework assignments asking children to reflect on their behaviours, monitor cognitive distortions and suggest more balanced thinking alternatives can help to generalise skills |

**Table 1.1 shows core features and benefits of using CBT.**

### 5. Benefits and limitations of group work

As the study presented in this PPR will be centred on a group intervention it is important to consider the benefits and limitations of this approach. Yaloum (1985) writes that benefits of group work include interpersonal learning and reducing stigma for participants involved in the intervention. Squires (2002) adds that groups provide a range of alternative viewpoints which can help to normalise feelings or behaviours because pupils in a group can recognise that they are not the only ones who feel or act in a certain way. He writes

that peer support generated through group interventions can continue outside group sessions.

Groups can be constructed in different ways. This research is centred on a mixed referral CBT group, which means that participants have been referred for a variety of reasons. Vickers (2002) comments that attendance rates for her mixed referral CBT group were high and suggests that this may be because of a strong group ethos and support between participants. She gives an example of how participants with internalising and externalising disorders are able to learn from each other's different skills. Burton (2006) supports this, writing that a mix of pupils increases opportunities to role model different skills for each other.

More practically, in terms of educational psychology service delivery, Squires (2001) comments that group work allows more pupils to be seen when EP time is limited. Burton (2006) describes six sessions of group work as feasible for EPs because it allows sufficient time to develop relationships within the group without being unrealistic on time demands for psychologists and school staff.

McDonald et al. (2003) point out that group work has been criticized for lack of skill generalisation to settings outside the group work context. Ogilvy (1994) writes that interventions can focus too much on cognitive and behavioural aspects without taking account of contexts in which the child's social interactions take place, for example, their family circumstance, classroom groups and friendship networks.

However, measures can be taken to overcome difficulties with generalisation. Golstein (1998, cited in Royer et al 1999) identifies techniques to promote skill generalisation and maintenance such as role-play, homework assignments and token reinforcement. McDonald et al (2003), in their study of a social skills training group that used CBT, attempted to ensure skill generalisation by having extensive parent and teacher liaison built into the intervention's structure. Finally, Verduyn et al. (1990) write that there is evidence of generalisation when interventions take place in school settings rather than clinical settings because they are more representative of the contexts in which children live.

## 6. A critical review of four school based CBT group interventions

Verduyn et al. (1990) write that social skills interventions, including those using CBT approaches, vary considerably in how they are constructed and delivered. This section demonstrates, through the review of four school based CBT group interventions, the great variance in terms of research aims, contexts, samples, intervention content and method. It is important to examine how previous research has been constructed in order to understand their limitations and seek to overcome them.

Four studies by Vickers (2002), Squires (2001), Humphrey and Brooks (2006) and Lochman (1992) were chosen for close examination because the interventions took place in school settings and delivered CBT approaches in a group setting therefore matching the intervention outlined in this PPR. Vickers (2002), Squires (2001), Humphrey and Brooks (2006) and Lochman (1992) claim that the CBT interventions were effective in relation to

their aims, all of which were specific to their studies. To assist with quick referencing a detailed summary of salient aspects of each study is presented in Appendix 2.

### 6.1 Ontological and epistemological assumptions relating to study designs

The studies do not explicitly outline the ontological and epistemological assumptions inherent in their research designs and can be criticised for this. However, by examining the research designs the associated ontological and epistemological assumptions can be inferred.

Vickers (2002), Squires (2001) and Humphrey and Brooks (2006) employ methods to generate both qualitative and quantitative data demonstrating aspects of nominalist and realist ontology and positivist and anti-positivist epistemology (Robson, 2002). It could be argued that Vickers (2002) concentrates more on generating qualitative data therefore valuing anti-positivist epistemology than Squires (2001) and Humphrey and Brooks (2006). Lochman (1992) seems to stand apart from the research and tries hard to be objective. He generates quantitative data alone demonstrating positivist epistemology.

### 6.2 Research designs

Cohen et al. (2007) explain that true experimental designs require randomised controlled sampling. This means members of the population have an equal probability of being selected for the study and allocated to treatment groups. Sampling in this way allows

generalisations to be made because the sample better represents the population at large and so has better validity. Although, true experimental designs are often strived for, Cohen et al. (2007) point out limitations of this kind of design. They explain that laboratory based experiments are not representative of the real world to the extent that classroom and school based experiments are.

In educational research it is not usually possible to conduct true experiments by randomly controlling samples. Experiments are usually 'quasi- experimental' and samples are chosen purposively. The studies in Appendix 2 could be described as having quasi-experimental designs. Cohen et al. (2007) explain that this type of research takes place in natural settings where variables are isolated, manipulated and controlled but where experiment designs do not meet the sampling requirements and random allocation to treatment groups required by true experiments. In view of the fact this type of research is carried out in natural settings, for example school classrooms, researchers have less control over experimental conditions. This means that extraneous variables make inferring causality more contestable than in experimental designs and limits the strength of conclusions which can be drawn from this type of research.

Cohen et al. (2007) draw out complexities of quasi-experimental designs by explaining that they can come in several forms and include pre-experimental designs (e.g. one-group pretest-post-test, one group post-tests only and post-tests only non-equivalent design), pretest-post-test non equivalent group designs and one group time series. These sub categories have differing strengths and limitations which will be discussed below.

Humphrey and Brooks' (2006) research design can be described as a one group time series quasi experimental design (Cohen et al. 2007). This design uses repeated tests and observations before and after interventions allowing trends to be observed. Humphrey and Brooks (2006) took measures at four points in time: four weeks before the intervention, when the intervention started, when the intervention ended and four weeks after that. Observations were made during the intervention period and interviews were carried out with participants directly after the intervention had ended. Cohen et al. (2007) write that this type of design can help to increase reliability and validity as there is not a reliance on testing at one point in time. There is however, only an experimental group so results can not be compared with a control group.

Lochman's (1992) design can be categorised as a quasi experimental pretest-post-test non-equivalent group design (Cohen et al. 2007) because he uses 2 control groups these being non aggressive boys and untreated aggressive boys. He does not randomly assign participants to groups but does try and increase validity by matching participants using measurement criteria such as teacher and peer ratings.

In contrast Squires (2001) and Vickers (2002) designs can be categorised as quasi experimental pre experimental designs (Cohen et al. 2007). Campbell and Stanley (1963, cited in Cohen et al. 2007) describe this kind of design as a bad example of research design because it fails to take into account the many extraneous variables that exist.

Although quasi-experimental designs have been employed in these studies some aspects of Squires (2001), Humphrey and Brookes (2006) and Vickers (2002) research is exploratory

in nature. Vickers (2002 p.251), for example, writes that she aims to 'gain a preliminary idea of which types of disorder or pattern skill deficit are likely to benefit from the intervention' and Humphrey and Brooks (2006) state they want to find out what factors facilitate or impede the progress of pupils on the programme. The qualitative aspects of the study designs can be criticised because they do not provide detailed accounts of the methods used. This will be discussed further below.

### 6.3 Sampling

Samples can be chosen in a variety of ways. Smith (1991, cited in Cohen et al. 2007) explains that randomly allocating participants to treatment and control groups ensures the greatest likelihood of equivalence between participants over a range of variables whereas matching samples, as Lochman (1992) does, produces equivalence on only a few named variables.

However, as explained above, in educational research randomly allocating participants is difficult and Cohen et al. (2007) explain that in small scale research non probability samples are chosen. Samples which are not randomly allocated are usually chosen when attempts at generalisation are not going to be made.

Vickers (2002), Squires (2001) and Humphrey and Brooks (2006) use samples which are not randomly allocated and do not attempt to match participants to groups. Their method could be described as non probability purposive sampling as participants were picked because of particular characteristics. Therefore, they are unable to claim they have

discovered generalisable laws because a small purposive sample is greatly different from the general population.

If generalisations are to be made, larger sample sizes should be considered. This, as Cohen et al. (2007) explain, helps to overcome the problems of sampling error, by ensuring that random effects and variation can be separated from non random effects and statistical analysis will be accurate. Cohen et al. (2007) advocate a sample size of 30 as a minimum number if statistical analysis is going to be carried out. Lochman (1992) use the largest sample. Squires (2001) and Humphrey and Brooks (2006) use statistical analysis but their samples include less than 30 participants. The small sample sizes in their studies mean that it is difficult for them to claim they have discovered generalisable laws. This, it could be claimed, is an aim of their underlying positivist epistemology.

### 6.4 Intervention context

Akande (2001) writes that practitioners need to be aware of wider community and cultural influences which affect adolescent's control of anger. This comment is applicable to all the interventions in that it is important to think about external factors that could have impacted on participant's attitudes and engagement in the intervention process.

Humphrey and Brooks (2006) think about influences external to the intervention which may have impacted on participant's success. However, no systematic method is used to do this. The other studies do not comment on these factors. This study extends the four

reviewed studies because all participants were asked if any influences external to the intervention impacted on their behaviour during the intervention process.

### 6.5 Intervention content

Robson (2002) writes that if researchers are concerned with what would happen with other participants or in different settings then they should consider the generalisability of the study. In order to generalise findings a study needs to be replicated and the sequence of the intervention should be transparent. Squires (2001) provides session plans which are useful for researchers wanting to replicate the intervention and Vickers (2002) provides detailed session outlines. Humphrey and Brooks (2006) provide an overview of the sessions which is less detailed as does Lochman (1992). However, Lochman (1992) writes that specific session content can be found in Lochman et al. (1987, cited in Lochman 1992).

Session plans and outlines are useful because comparisons can be made across interventions to judge how they are the same or differ. This information can help determine what aspects of the intervention were effective in relation to the intervention context. Taking guidance from Squires (2001) session plans, for this intervention, are provided in Appendix 5.

### 6.6 Review of methods with particular focus on their usefulness in gaining participant's views

Lochman's (1992) study used the Coopersmith Self-esteem Inventory (CSI, Coopersmith, 1967) and the Problem Solving Measure for Conflict (Lochman and Lampron, 1986). He does not discuss the reliability and validity of these tools. Lochman (1992) also used the Behaviour Observation Schedule for Pupils and Teachers (Allen et al. 1976, Breyer and Calchera, 1971) but does make reference to the inter-rater reliability and construct validity of this tool, stating that it has been demonstrated in previously published research. References for these tools are cited in Lochman (1992).

Lochman's methods did not gain programme participant's perspectives of the intervention process. He used individual structured interviews where participants responded to portions of the National Youth Survey questionnaire (Elliot et al. 1985 cited in Lochman, 1992). The interviews were focussed on participants' behaviours in regards to drug use and behaviour rather than their experiences of the intervention. These interviews were analysed numerically and the verbatim of participants' responses are not included.

Squires (2001) used self-report questionnaires to measure Self-concept (Lipsett, 1958, cited in Squires, 2001), Peer Relations (Hudson et al. 1982, cited in Squires, 2001) and Self control (Humphrey 1982, cited in Squires, 2001). He also uses an observation checklist (Faupel et al. 1998, cited in Squires, 2001) to gather teacher ratings of classroom behaviour pre and post intervention. The validity and reliability of these tools is not discussed. Squires (2001) analysed the group's results and acknowledged that the group results

masked individual progress. He provides the example that some pupils showed big differences in the self rating questionnaires pre and post intervention but the reasons for this could not be explored through the questionnaire format.

Humphrey and Brooks (2006) use the RRTS (1967, cited in Humphrey and Brooks 2006), which they comment is psychometrically sound for assessing whether their cognitive behavioural anger management intervention was effective for a group of pupils at risk of exclusion. Scalre (1997, cited in Humphrey and Brooks, 2006) writes that this tool is suitable for children up to the age of 16 and Elander and Rutter (1996, cited in Humphrey and Brooks, 2006) comment that it has good test-retest reliability. Kreppner, O'Connor and Rutter (2001, cited in Humphrey and Brooks, 2006) comment that it has moderate to good internal consistency.

The names of quantitative tools have been included in the studies and this helps the research to be replicable. None of the studies which use standardised checklists have made reference to the sample upon which the checklists were standardised and its concurrence with the sample in their studies, making it challenging to determine whether they were appropriate tools to use with their participants.

Qualitative methods of data collection, used by Vickers (2002), Squires (2001) and Humphrey and Brooks (2006), are less clear. Squires (2001) obtained pupils' views of the intervention through an open-ended question, but he does not state what this question was and it is not clear whether all participants responded to the question. Teachers' views were also gained but the method for doing this is not made clear. Humphrey and Brooks (2006)

obtain stakeholders' views of the intervention in some depth using semi-structured interviews. However, they do not differentiate factors which are external to the intervention and those which are inherent. Although they present excerpts of their semi-structured interviews they do not provide the interview schedule which makes it challenging for researchers to replicate this aspect of their study. Humphrey and Brooks (2006) do provide an outline of the qualitative data analysis and interpretation methods they use however, more precise guidance on how their qualitative data was gathered is needed.

Vickers (2002) uses qualitative analysis in the form of individual clinical vignettes, which provide a rich understanding of supposed participant gains. She does not however, delineate how she created the clinical vignettes which she used to demonstrate clinical change in programme participants. Vickers (2002) also discusses factors which could have contributed to high attendance rates such as: a strong group ethos, mutual support between group members and clear progression of structured sessions with the themes of each session known in advance. However, these postulations are made by Vickers (2002). She does not ask programme participants and so her postulations are not validated.

Critical analysis of the 4 studies demonstrates that participants' views have been collected through open-ended questions (Squires, 2001) or semi-structured interviews which do not differentiate between external and inherent factors in the intervention process (Lochman, 1992, Humphrey and Brooks, 2006). Programme participants' views of the CBT intervention were not systematically collected as part of the evaluation of the intervention.

## 7. Exploration of Programme Participants' Views of Factors Facilitating and Impeding a CBT Group Intervention

### 7.1 Aims

This study will extend on the aims of the 4 studies reviewed above by trialling the 'Ideal Self' technique (Moran, 2001) to systematically gain programme participants' views of a mixed referral school based CBT intervention. Aspects of Realistic Evaluation (Pawson and Tilley 1997) will be used to differentiate external and inherent factors in the intervention process, which may have influenced intervention outcomes. A clear description of qualitative data collection methods will be provided, which also extends information provided by the 4 studies reviewed above.

### 7.2 Methodology

The ontological assumptions in this study illustrate allegiance to a nominalist paradigm (Robson, 2002). The nominalist view holds that reality is the product of individual consciousness and that objects (what is being researched) are not independent from the person who perceives them. Nominalists emphasise that events and individuals are unique and people are able to interpret events. They also assume that there are multiple interpretations of events therefore reality is complex and many events are not reducible to simplistic interpretations or generalisations. Cohen et al. (2007) explain that the nominalist paradigm values human skills such as self awareness and language. Proponents of this paradigm focus on questioning participants and valuing their perceptions.

This qualitative study aims to understand phenomena in a context-specific setting (Golafshani, 2003). It does not seek to uncover generalisable laws and cannot attempt to do so in part because of the small sample which was not randomly allocated to control and experimental groups, making it challenging to generalise findings to differing contexts. The research methods use in this study adopt anti-positivist epistemology in that qualitative data was gained by interviewing participants and this was considered to be valid knowledge.

### 7.3 Ethical considerations

Ethical issues were considered in line with the British Psychological Society's Code of Ethics (2006). Informed consent (Lewis, 2002) was gained from all participants and their parents before they engaged in the intervention. In order to gain this consent the researcher ensured that information about the purpose of the group was given to parents in the form of a letter. The researcher also explained the aims of the group to the children individually and as a group. Participants were informed that they were able to leave the group at any time if they felt uncomfortable in any of the sessions.

Parents and children were given a period of more than 5 days to think about whether they wanted to take part in the group. Parents signed a consent form for their children to participate in the group and this was seen by the researcher before the intervention started. Children gave their consent orally, on an individual basis, to the researcher and to the Special Educational Needs Co-ordinator (SENCo) for their school, who was well known to them.

In keeping with Humphrey and Brooks (2006) the researcher deemed completing the research without a control group to be more ethical and in keeping with her anti-positivist epistemology. Follow up support was offered to participants involved in the intervention and as part of the evaluation all participants were seen by the researcher following the intervention. As the researcher was a visiting trainee educational psychologist (TEP) frequent meetings with the SENCo ensured that any issues with the participants could be flagged up easily.

### 7.4 Research design and procedure

Previous sections of this PPR have demonstrated that it is important for researchers to have a clear understanding of how interventions are structured. Therefore, salient features of this intervention are presented in Table 1.2 below.

**Aims**

To gather programme participants' views of factors inherent in the intervention and those external to it that impeded and facilitated their progress. (Research question: What mechanisms and contexts/outcomes impeded and facilitated the intervention?)

To trial and reflect on the Ideal Self technique (Moran, 2001) and aspects of Realistic Evaluation (Pawson and Tilley, 1997) as a means of gathering programme participant's views.

**Design**

Applies aspects of an illuminative, exploratory single case study design (Yin, 2003). Yin (2003 p.15) writes that a case study method can be used to explore situations when the 'intervention being evaluated has no clear, single set of outcomes.'

**Intervention context**

The school is situated in a large West Midlands local authority. It is a very large community primary school with approximately 700 pupils on roll. The majority of pupils are from ethnic minority groups and the proportion of pupils with learning difficulties and/or disabilities is above average.

**Sample**

Non probability purposive sampling (Robson, 2002) was used to select participants. This meant that children referred for the group intervention were identified by their class teachers and the teaching assistant (TA) who would co-run the intervention. Five participants were selected. They were all male, British Asian (majority of pupils in the school were from minority ethnic groups) and in Year 5 at the school. Four of the participants were in the same class. Participants were described by their class teacher and the SENCo as having social, emotional and behavioural difficulties which significantly impacted on their classroom behaviour and self esteem on a daily basis. Specific concerns were in the areas of impulsivity, lack of concentration, low self esteem, anger and aggression.

One participant had a Statement of Special Educational Needs (DfES, 2001) and a diagnosis of Attention Deficit Hyperactivity Disorder. One participant was on School

Action Plus of the Code of Practice (DfES, 2001), two children were being monitored because of behaviour difficulties and one child was identified as vulnerable because of low self-esteem.

**Procedure**

Four weeks before the intervention a research proposal was drafted by the researcher and discussed with the school SENCo and the Teaching assistant (TA) who would be delivering the intervention with the researcher.

Two weeks before the intervention, the Ideal Self technique (Moran, 2001 see Appendix 3) was used with each of the 5 participants to gather their views of themselves. The sessions lasted approximately 30 minutes each. Six CBT sessions were run in the school setting over ten weeks. School holidays provided a 3 week gap between the second and third CBT session.

Four weeks after the final CBT session the Ideal Self scaling line (Moran, 2001) was used as a conversation stimulus to elicit programme participant's views of the intervention. This took place during a review meeting (see Appendix 4) with the researcher and each participant. The meetings lasted between 20-30 minutes. After review sessions with each participant the researcher used aspects of RE (Pawson and Tilley, 1997) to code participant responses (see 4.5 below).

**Intervention** (The session plans for each of the six sessions can be found in Appendix 5)

**Structure**

The group began towards the end of the second half of an Autumn term and continued until towards the end of the first half of Spring term. A different component of CBT was taught during each session and practice exercises completed. The intervention comprised of six group sessions lasting approximately 70 minutes each. As with Burton's (2006) study, there was sometimes more than a week between sessions. This was not thought to be detrimental as it was judged that there could be more opportunities for skill practice and generalisation out of the group context if the group continued over a longer time period (Burton, 2006).

**Setting**

The intervention was carried out at the primary school that all the participants attended. Taking guidance from Vickers (2002) each session was held in a large private room within the school. The TA, researcher and participants were present. Four large tables were in the room and a mixture of small chairs and larger cushioned chairs which were usually used at the beginning of the session and during group discussions. The tables and chairs were used when participants were completing practice exercises.

**Facilitators**

A TA who had experience of working with pupils with social, emotional and behavioural needs co-ran the intervention with the researcher. The researcher was a TEP in her second year of doctoral study on an Applied Child and Educational Psychology doctorate programme. She had received two and a half days CBT training from several EPs, not all of whom were accredited trainers. She had also read extensively in the area of CBT. Prior to enrolling on the doctorate programme she had been a qualified teacher for two years, teaching children in mainstream schools in Year 5 and Year 5/6 as well as having experience working with children and young adults in a variety of settings such as after school clubs and residential care settings.

**Intervention planning**

Squires (2001) recommends that in the planning stage discussions take place about whether the same school staff member would be available over the course of the intervention so as to maintain stability for pupils and to ensure that they feel secure with the group leaders. The researcher ensured that the TA was available for each of the sessions over the course of the intervention period. However, personal circumstances meant that the TA was unable to attend session 5 which the researcher ran on her own.

The researcher planned each CBT session independently but time was allocated before each group session to explain the session plan to the TA. Activities such as leading the warm up game and supporting participants during discussion and individual activity time was allocated to the TA.

Time was planned at the end of each session for the researcher and TA to consider the

responses of participants during the session and for them to formatively evaluate.

The researcher had an idea of the elements of CBT she wished to cover over the course of the intervention. However, each session was planned following the previous session so that any pertinent issues could be incorporated into subsequent sessions.

Stallard (2002a), Grave and Blissett (2004) and Henin, Warman and Kendall (2002) write that CBT interventions should take developmental considerations into account such as the age of the child and this should be used to inform the intervention. Therefore, the researcher took care to include examples of concepts in forms which the researcher felt that the children could relate to such as short stories and group talk exercises.

**Intervention delivery**

The sessions were interactive in nature with lots of time allocated to group discussion and exploration of behaviours, thoughts and emotions. Group rules were established by the participants during the first session and used throughout the intervention process (See Appendix 6). The principle of confidentiality was discussed so that group members knew that information they shared in the group would not be passed on to others outside the group, unless Child Protection protocol made this necessary. The group were also asked to work collaboratively to choose a group name to help to foster a community spirit amongst the group members. Folders were also given out to each participant in which they could keep their work and homework assignments safe. A miniature ceramic dragon which was named 'talking dragon' was used to promote turn taking and appropriate listening amongst participants.

Henin, Warman and Kendall (2002) write that behaviour contingencies are an important feature of some CBT programmes. They point out that because of the aversiveness of aggressive behaviours children in the intervention may have seldom received praise for their behaviour at school. They stress the importance of self-evaluation, self reward and social reward for example praise from the person delivering the intervention. During this intervention participants were praised regularly for their behaviour during sessions, attention, and improvements in individual behaviours identified on their referrals.

| |
|---|
| A raffle ticket system which mirrored a class reward system was established. In sessions participants were rewarded with a raffle ticket for appropriate behaviours such as completion of homework assignments, listening to their peers, and engaging with the session materials. Raffle tickets gained from CBT sessions could be added to the tickets they gained in class.<br><br>After each session pupils were given homework exercises to generalise what had been covered during the session into other aspects of school and home life. The assignments were discussed during the next session. If participants had not completed the assignment they were asked to think about the task during allocated discussion time. This was to avoid creating tension and feelings of failure (Squires 2001). Participants were reminded that assignments would help them to learn new skills and that it was important to practice skills as much as possible in order to retain them. |

**Table 1.2 illustrates procedures pertinent to the CBT intervention**

### 7.5 Method

#### 7.5.1 The Ideal Self technique (Moran, 2001)

Moran (2001) explains that the Ideal Self technique is based on Kelly's (1955) work on Personal Construct Psychology (PCP). She explains that it is a useful tool to delve into the child's world. Moran (2001, p.600) writes that this is important because 'clients are expert on their own selves'. The researcher wanted to use this technique to enable participants to share their view of the world with her. The Ideal Self technique (Moran, 2001) was used with programme participants so the researcher could monitor change in their views of themselves pre and post intervention and to elicit views of factors which facilitated or impeded the intervention.

The technique is explained fully in Moran (2001) and this paper should be referred to for more detail. Appendix 3 provides an outline of how the technique was used in this study. Examples of how this technique has been used in school based settings to evaluate programme participants' views of CBT group interventions could not be found. However, Hardman (2001) used the Ideal Self (2001) technique as part of educational psychology casework to elicit a child's 'world view' of himself. Therefore, the rationale for using the technique in her study was similar to the rationale in this study.

In terms of evaluating the intervention the scaling line, part of the Ideal Self technique, was used to review how participants felt about themselves following the CBT intervention. Four weeks after the last CBT session the researcher interviewed each participant. Participants were asked where they were on the Ideal Self (Moran, 2001) scaling line in terms of whether they were nearer the 'person they would like to be', 'the person they wouldn't like to be' or in the same place as they were before. During these conversations questions were asked which led to identification of contexts and mechanisms inherent and external to the intervention that had facilitated the change in their perceptions of themselves and their behaviour (see Appendix 4). Comments from participants were written down during the interview and these were later coded against RE definitions which are presented in Table 1.3 below.

### 7.5.2 Using aspects of RE (Pawson and Tilley, 1997)

Pawson and Tilley's (1997) approach follows realist ontology. If adhered to strictly, it has a focus on drawing conclusions about the effectiveness of interventions believing that generalisable laws can be found. Pawson and Tilley (1997) suggest RE as a way to characterise programmes/interventions by isolating variables in order to determine what is most likely to work and with whom. As explained previously, this study is exploratory in nature and does not seek to explain cause and effect or discover generalisable laws. Only aspects of RE (Pawson and Tilley, 1997) have been used to categorise pupils' comments into mechanisms and contexts/outcomes. Definitions of mechanisms and contexts that were used to categorise data gathered from the Ideal Self technique (Moran, 2001) into facilitative and impeding contexts and mechanisms are summarised in Table 1.3.

| **Term** | **Definition** |
|---|---|
| **Contexts** | • Settings within which programmes take place<br>• Factors outside the control of the intervention<br>(e.g. participant's motivation, participant's outlooks, perceptions and skills which will differ according to the individual, organizational contexts and structures) |
| **Mechanisms** | • Things people working within the intervention do to produce the desired outcome |
| **Outcomes** | • Effectiveness of the intervention determined by contexts and mechanisms |

Table 1.3: Definitions of Contexts, Mechanisms and Outcomes (Adapted from Timmins and Miller, 2007)

### 7.6 The validity/credibility of the research

Robson (2002) and Carr (1986) explains that a weakness of case study research is that results may not be generalisable. This research will be able to offer tentative data that suggests mechanisms and contexts/outcomes which programme participants deemed facilitative and those which were viewed as impeding their progress.

Pring (2000) discusses the concept of 'uniqueness fallacy'. He states that uniqueness in one respect does not mean uniqueness in all respects, pointing out that qualitative approaches should be able to make at least some level of generalisation. In terms of this study the sample size was small and the intervention took place in one school setting. Hence, this limits the transferability of results to other populations and settings. However, taking guidance from Pring (2000) information such as the referral reason, school context and intervention content have been included so that it is possible to assess whether information gained from this study could be generalised to other settings and so contribute to understanding in differing contexts.

Other threats to the validity/credibility of the research may have emerged because the researcher, who was the main session leader, was not an accredited CBT therapist and the TA was new to CBT approaches. Although great care was taken to follow CBT theory and include core elements of the approach the inexperience of the session leaders may have threatened the success of the intervention. The researcher also commissioned and carried out the research. The fact that data was not analysed and coded by an additional person may impose limitations in terms of its trustworthiness and credibility (Lincoln and Guba, 1985). The time available to consult with each of the participants was constrained because

of the busy school schedule. This may have meant that everything participants wanted to share may not have been adequately discussed. Thus, impacting on the 'scope, depth and richness of data' that Winter (2000) deems important for qualitative data credibility.

As discussed previously, no research on how the Ideal Self technique (Moran, 2001) or RE (Pawson and Tilley, 1997) have been used to evaluate CBT interventions could be found. This meant that guidelines about how to use the techniques in this context were not available. In regards to the Ideal Self technique (Moran, 2001), the researcher was unable to refer to previous research about effective types of questioning to use in order to elicit relevant information from participants. The researcher did not have guidance on whether to discuss the Ideal Self drawings participants had made when they first completed the task at the review meeting or to solely focus on using the scaling line (see Appendix 3) for Ideal Self procedure). In this instance only the scaling line was used at the review meeting but this may have meant that pertinent information which could have been gained from discussing the Ideal Self drawings was not elicited.

## 8. Results

### 8.1 Facilitating/impeding mechanisms

Mechanisms which facilitated and impeded the intervention from programme participants' point of view were grouped into themes and are presented in Table 1.4 and 1.5. The number in brackets indicates the number of participants who made the response.

| Themes | Features |
|---|---|
| Intervention content<br>(13 responses) | Automatic thoughts (2)<br>Thinking errors (4)<br>Using stories to convey messages (3)<br>Problem Solving (2)<br>Relaxation and Visualisation tasks (2) |
| Intervention planning and structure<br>(4 responses) | Introductory games (1)<br>Having a folder (1)<br>Having homework (1)<br>Naming the group (1) |
| Facilitators Behaviours<br>(2 responses) | Team work between the facilitators (2) |

**Table 1.4 Mechanisms which facilitated the intervention**

| Themes | Features |
|---|---|
| Intervention content<br>(2 responses) | Too much listening (1)<br>Wanted more ball games (1) |
| Intervention planning and structure<br>(4 responses) | Size of the group was too small (1)<br>Sessions were too long (1)<br>Sessions were too infrequent (1)<br>More homework that covered a variety of CBT topics that were not just linked to the CBT session (1) |

**Table 1.5 Mechanisms which impeded the intervention**

### 8.2 Facilitating/impeding contexts/outcomes

Facilitating and impeding contexts/outcomes were grouped into themes and are presented in tables 1.6 and 1.7. The number in brackets indicates the number of participants who made the response.

| Theme | Features |
|---|---|
| Participant's outlooks (7 responses) | Sessions were fun (3)<br>Participant liked other members of the group (1)<br>Participant liked going out for sessions with the facilitators (1)<br>Participant enjoyed sitting on comfy chairs (1)<br>Participant liked feeling part of the group (1) |
| Participant's behaviours (12 responses) | Everyone listened to each other (1)<br>Everyone looked after each other during the intervention (1)<br>People showed good behaviour like putting their hand up and not criticising each other (2)<br>Participant used the internet to research how not to fight (1)<br>Participant commented that they altered their previous behaviour "I got hyperactive when I drank Pepsi so I don't anymore" (1)<br>Participant commented that they were not in the incident book as much (1)<br>Participant commented that he felt guilty when he received a detention (1)<br>Participant commented that he wasn't aggressive anymore (1)<br>Participant commented that he was able to "ignore silly people" (1)<br>Participant commented that they didn't shout out in lesson(2) |

| | |
|---|---|
| Other people<br>(4 responses) | My sister took me to the library (1)<br>My mum and aunty said they believed in me (1)<br>My mum helped me she told me 'do your work' and 'don't look at other people' (1)<br>Mrs X helped me at play times. (1) (the co-facilitator) |

**Table 1.6 Contexts/outcomes facilitating the intervention**

| Themes | Feature |
|---|---|
| Participant's outlooks<br>(7responses) | Didn't like having sessions during PE (3)<br>Didn't like missing lessons: We could have the group after school(2)<br>Sometimes I wasn't motivated (1)<br>Other children's behaviour wasn't always good(1)<br>My behaviour (1) |
| Participant's behaviours<br>(5 response) | I didn't listen (1)<br>I talked (1)<br>I got annoyed with other children in the group (1) |
| Organisational structure<br>(2 responses) | The room was too light (1)<br>The room was too cold (1) |

**Table 1.7 Contexts/outcomes impeding the intervention**

## 9. Discussion

### 9.1 Intervention outcomes

When participants were asked four weeks after the end of the CBT intervention to review the scaling line they had completed (part of the Ideal Self Technique, Moran, 2001) all programme participants held the opinion that they had moved further towards the 'person they would like to be.'

Table 1.6 shows that pupils identified outcomes for themselves such as being less aggressive, not shouting out in lessons and being able to ignore "silly people". One participant reported that as an outcome of the CBT intervention his name was not in the school incident book for inappropriate behaviour.

Comments from participants also indicate self-awareness, for example one participant noted that he had altered his behaviour. He recognised that drinking a fizzy drink made him "hyperactive" and he reported that he had stopped drinking this type of drink. Participants were also able to reflect on their own behaviour during sessions and, often without prompting, suggested reasons why they may not have moved further towards their Ideal Self for example, recognising that they may not always have listened during sessions, got annoyed with other participants or talked. These comments illustrate a degree of self-awareness, which Stallard (2002b) writes is the ultimate goal of CBT. Although these comments were made in response to questions about the CBT intervention they still need

be interpreted with caution as changes in behaviour may have been due to factors other than the CBT intervention such as changes in school and home settings.

### 9. 2 The Ideal Self technique (Moran, 2001)

All participants reported that they enjoyed using the Ideal Self technique (Moran, 2001) and even though several months had elapsed since they had first completed the activity all participants remembered what it had entailed. This may indicate that the technique is child friendly because participants appeared to understand the activity and enjoyed using it.

One participant's response was particularly useful in demonstrating that participants need varying degrees of follow-up support after the intervention. He explained that he had started to move back down the scaling line towards the 'person he would not like to be'. When he was asked why he thought this was he explained that it was because he felt sad that the intervention had ended and did not feel part of the group. This suggests that perhaps this participant had felt supported by the intervention group (Squires, 2002). Even though Squires (2002) commented that peer support generated through group interventions can continue outside group sessions this participant felt that he had lost support once the group had ended. It would be useful to consider what on going support could be made available.

Using the scaling line to gather programme participants' views of the intervention proved successful in prompting participants to identify and discuss a range of mechanisms and contexts/outcomes which they felt facilitated and impeded the intervention process. It

seems important to gather this information as an integral part of evaluating group CBT interventions so that factors inherent and external to the intervention can be shared with people establishing the intervention to inform future practice and also to identify factors which may support positive outcomes for those involved. The wealth of information shared with the researcher shows that children, as programme participants, were able to evaluate the intervention.

### 9.3 Coding data using aspects of RE (Pawson and Tilley, 1997)

#### 9.3.1 Facilitating and impeding mechanisms

Components of Beck's (1967) tripartite CBT model, described in Table 1.0, were identified by programme participants as helping them move towards the 'person they would like to be.' (Moran, 2001) Sessions focussing on automatic thoughts were identified by two participants and four participants identified sessions on thinking errors (part of the faulty information processing system). The third part of the model which focuses on core beliefs was not taught as part of the session content and so could not be identified by participants. Three participants reported that the use of stories was a facilitative mechanism and 2 participants reported that learning about problem solving and being taught relaxation and visualisation techniques was also useful.

Kendall (1993) reported that core features of CBT approaches were that it provided opportunities for children to discover how they think about events, appraise situations and provide opportunities to practice new ways of thinking. Participants identifying automatic

thoughts and thinking error sessions would support Kendall's view. Participants identifying stories, relaxation and visualisation techniques as facilitative mechanisms may suggest that it is important that the effectiveness of these techniques in CBT interventions is further explored.

Homework was identified in Table 1.1 as a core feature of CBT interventions. Only one participant identified having homework as a facilitating mechanism. However, none of the participant's identified it as being detrimental to the intervention process, apart from one participant commenting that there was not enough of it, or as wide a range as he would have liked. Further research could investigate what programme participants felt about homework assignments as the researcher sometimes felt, from reactions towards explanations of the homework assignments, that participants viewed it as a less attractive part of the intervention.

The majority of impeding mechanisms were grouped in the theme 'intervention planning and structure', although only one participant commented on each impeding mechanism. Comments were that the group was too small, sessions too long and infrequent and more homework covering a wider range of CBT areas should be given. These impeding mechanisms warrant further research to establish whether other programme participants involved in this type of CBT intervention make similar comments.

### 9.3.2 Facilitating and impeding contexts/outcomes

For facilitating contexts/outcomes 'participant's behaviour' was the theme with the most comments. It should be noted that 2 adults were involved in delivering the group and this may have contributed to good behaviour during sessions. The second theme with the most responses was 'participant's outlooks'. The responses suggest that it is important that participants regard the intervention in a positive light. For example, three participants reported that they found the intervention "fun". Other comments reported by individual participants were that they liked members of the group; they liked the room they were in and enjoyed feeling part of a group. Interestingly, participants identified their own behaviours as impeding the intervention as well as facilitating it. As noted above, these comments may illustrate that participants were aware of the effect of their behaviour on others, an aim of CBT interventions (Stallard, 2002b).

Another context facilitating the intervention was 'other people'. Participants made comments such as 'my sister took me to the library' and 'my mum and aunty said they believed in me' suggesting that participant's family can be important in influencing their behaviour. Subsequent interventions may benefit from including parents/carers more fully, possibly through parent meetings, letters and informal conversations with the group facilitators. Comments from participants in this study may support McDonald (2003) when he recognised the importance of including family in CBT interventions. Further research could explore this in more detail.

The biggest contextual factor impeding the intervention was categorised in the participant's 'outlook theme'. Three participants indicated that they did not like missing Physical Education lessons and two participants said they did not want to miss other school lessons. A participant commented that they would have preferred sessions after school. In accordance with the BPS Code of Ethics (2006) participants were informed that they could withdraw from sessions if they wanted to. However, participants chose not to. The researcher did try to reschedule sessions for other times in the week but practical issues involving room and staff availability prevented this.

Participant feedback on this issue suggests that it is important that sessions are scheduled at times which are acceptable to programme participants as well as school staff. This is particularly important as a theme facilitating the effectiveness of the intervention was participant's viewing the intervention positively. If participants miss favourite lessons this could change their outlooks/perceptions of the intervention.

### 9.4 Using RE (Pawson and Tilley, 1997)

During the review interviews participants discussed outcomes such as "not being in the incident book as much", sessions being "fun" and altering behaviours such as not drinking fizzy drinks. Unfortunately, the interview questions that the researcher used did not explore how these outcomes came about, for example whether specific factors inherent or external to the intervention had created or contributed to these outcomes.

Data collection and analysis would have benefited from the researcher gathering more precise feedback from participants. This could have been achieved by exploding their comments, enabling separate coding of contexts and outcomes and tentative conclusions about causal links to be made. Instead, because of weaknesses in data collection methods during interview, data has been conflated into 'contexts/outcomes'.

To achieve more precise data better use of prompting and probing techniques could have been used to generate a fuller picture of how mechanisms inherent in the intervention contributed to participants' accounts of their outcomes. This may have been achieved by the researcher adhering more closely to all aspects of RE. If, for example, the Realistic Interview approach (Pawson and Tilley, 1997) had been used participants would have been asked which aspects of the programme (mechanisms) impacted on them the most *and* how these mechanisms contributed to the outcomes they experienced. In this study only the former question was asked. Also if RE was used in a purer form, Timmins and Miller (2007 p.10) explain that the research would aim to discover 'which contexts are most effective in triggering the mechanisms that result in the desired programme outcome.'

### 9.5 Gaining feedback and presenting data

Fewer impeding mechanisms were reported by programme participants. This may be because the researcher, who was eliciting feedback, also ran the intervention. Programme participants may have been unwilling to share negative feedback. In future studies, it may be more appropriate for a person not directly involved in the intervention to elicit feedback. On the other hand, the researcher thought she had created a good rapport with

programme participants during the course of the intervention and this may have helped participants to feedback honestly. Moreover, it was useful for the researcher to elicit participant feedback because this enabled feedback to be coded accurately as the researcher was able to connect feedback to the intervention content.

Also, in terms of data collection and data presentation it may have been useful to code or theme 'features' further, for example on a case by case basis to show case specific patterns. This would be useful in assessing whether particular participants were making more comments than others and whether the type of comments they made was linked to their referral. If richer data was collected, as Winters (2000) comments, this would help to improve research validity/trustworthiness.

## 10. Conclusion

A range of mechanisms and contexts/outcomes which programme participants thought facilitated and impeded their progress were found as a result of this research. However, as acknowledged previously, the sample for this research was small. Ways of increasing the trustworthiness of the research would be to conduct similar research using a larger sample and different contexts, in this way a larger body of evidence can be formed.

Using the Ideal Self technique (Moran, 2001) proved useful in encouraging participants to discuss factors which facilitated and impeded the intervention. However, further research which explores the type of supplementary questions that can be used as part of the Ideal Self scaling technique (Moran, 2001) or whether Realistic Interviews (Pawson and Tilley,

1997) can be used alongside the Ideal Self scaling line is necessary. Thus, more research that focuses on creating and evaluating trustworthy qualitative data collection methods to assess the outcome of CBT interventions, including the effect of particular contexts and mechanisms in intervention outcomes is needed.

In conclusion, this illuminative study suggests that this group of children, in their role as programme participants, were able to contribute to evaluating the CBT intervention. It is hoped that this study will assist TEPs and EPs when thinking about the importance of exploring methods which gather the views of programme participants, particularly the voice of the young person, involved in the intervention.

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## Appendix 1: An overview of psychological theory which has influenced the development of CBT

Simos (2002) writes that since its development in the 1960's cognitive behavioural therapy (CBT) has developed its own identity within clinical and developmental psychology. He proclaims its effectiveness in the treatment of anxiety disorders, obsessive compulsive disorders, eating problems and family problems. Stallard (2002b) comments that CBT has been effective in treating individual children with difficulties which include depressive disorders, social phobias and school refusal. Vickers (2002) points out that CBT is increasingly being adapted for delivery to groups of adolescents.

Blackburn and Twaddle (1996) writes that cognitive therapy, a field of applied psychology, focuses on the importance of mediating thought and that this leads to changes in human behaviour. She identifies three strands of thinking which are prominent in this area: a phenomenological approach which advocates that views of oneself and the world are central in determining behaviours (Adler, 1936, Horney, 1950 cited in Blackburn and Twaddle, 1996), structural theory which describes the concept of hierarchical structuring of knowledge and thinking processes (Piaget, 1972 cited in Blackburn and Twaddle, 1996) and cognitive psychology which expounds the importance of cognition in information processing and behavioural change. (Williams et al. 1988 cited in Blackburn and Twaddle, 1996) Influences on cognitive psychology from the clinical field of psychology are cited by Blackburn and Twaddle (1996) as being Kelly's work on Personal Construct Psychology (1955) and Arnold (1960) and Lazaraus' (1966) work which makes clear the important role of cognition in emotional and behavioural change.

Blackburn and Twaddle (1996) and Stallard (2002b) both draw attention to Bandura's Social Learning theory (1977) which Blackburn and Twaddle (1996) writes is important in explaining the development of new behaviour patterns in terms of cognitive aspects of observational learning. Stallard (2002b) writes that the work of Meichenbaum (1975) created a focus on cognitions. Meichenbaum (1975) developed self instructional training, which emphasised that behaviour is under the control of thoughts and internal speech. Stallard (2002b) also explains that Ellis (1962) linked emotions and cognitions in rational emotive therapy, by proposing that emotion and behaviour come about from the way in which events are perceived rather than what may actually occur.

**Appendix 2: Summary of four school based CBT interventions**

| **'Using Cognitive Behavioural Psychology with groups of Pupils to Improve Self-Control of behaviour'**<br>**Squires (2001)** |
|---|
| **Relevant Aims: p.320**<br>1. To evaluate whether improvements noted in adult studies and individual case work could be achieved with a group of mainstream pupils. |
| **Design**<br>Quasi experimental one group pre-test post test design. |
| **Intervention Context**<br>• Carried out in two schools a middle school and a secondary school in England.<br>• Each group was let by an EP and was supported by a teacher from the school<br>• 6 one hour sessions |
| **Sample**<br>• 17 pupils took part in the intervention<br>• 13 males and 4 females<br>• Three groups of six to nine pupils from Year 5 to Year 8.<br>• Teacher descriptions reported children with Asperger's syndrome, ADHD, withdrawn, difficulties with peers, bullying, behaviour difficulties, difficult home background and lying took part in the intervention.<br>• Excluded pupils on the verge of being excluded or referred to the Psychological Service because they may need to be assessed for a Statement of Special Educational Needs for emotional and behavioural difficulties. |
| **Intervention content**<br>• Each session started with a welcome, forming or remembering group rules.<br>• Followed by a warm up activity which matched the sessions content<br>• Then homework activities were reviewed and new teaching introduced<br>• Each session closed by explaining homework, providing feedback and asking pupils for self validations.<br>• Sessions leaders used techniques common to a humanistic approach as well as CBT.<br>• Appendices are included ion the research. These provide a session plan for each of the six sessions and a list of humanistic techniques.<br>• Squires (2001) writes that flexibility was important and issues that participants brought up were sometimes used to inform the session rather than materials planned for the session. |
| **Methods used to evaluate intervention**<br>Quantitative and qualitative data gained.<br>• Quantitative: Standardised Self report questionnaires to measure Self-Concept (Lipsett, 1958), Peer Relations (Hudson et al. 1982) and Self control (Humphrey, 1982)<br>• Quantitative: Teacher ratings of classroom behaviour pre and post intervention using an Observation Checklist (Faupel et al. 1998)<br>• Results from pre and post questionnaires were analysed using a Wilcoxon signed ranks test using SPSS for Windows. |

- Qualitative: Open ended questions on a post group questionnaire.
- A two month follow up was arranged in one school and teachers commented positively. Squires (2001) is not clear whether this was via interview/questionnaire or other methods. Also, it is unclear what they commented on apart from saying the project was beneficial to developing Head's of Year and that the 'connection made with pupils' (p.324) was positive.
- A six months follow up was offered to pupils and positive comments were received. Squires (2001) is not clear how these comments were gained or what the follow up meeting consisted of.

**Views of participants gained?**

- Participants qualitative comments were gained on a post group questionnaire but the questions are not included in this research paper.

**Outcomes**

- 16 out of 17 pupils showed improvement in at least one area measured (Self concept, peer relations, self control and class behaviour).
- A statistically significant difference for pupil's ratings of self and teacher ratings of classroom behaviour pre and post intervention was found.
- No significant difference was for found for self concept or peer relations.
- Qualitative comments display a range of feelings experienced by participants e.g. 'this has helped with my handwriting because I don't get angry with it', 'its helped me learn not to shout out', I am able to talk about my feelings', ' others see me as more behaved.' (See Squires, 2001 for full list of qualitative comments.)

**'Cognitive Behaviour Therapy for Adolescents with Psychological disorders: A Group Treatment Programme'**
**Vickers (2002)**

**Relevant Aims: p251**

1. To devise a programme that would be user friendly for the adolescent population, drawing on various treatment modalities but using the CBT ethos of clarity, goal directedness and collaboration throughout.

2. To gain a preliminary idea of which types of disorder or pattern skill deficit are likely to benefit from such a group intervention, by describing clinical vignette and a measure of change for each group attendee.

**Design**

Quasi experimental pre- test post test design
Described by Vickers, 2002 as a 'closed group therapy design' p.251.

**Intervention Context**

- 12 sessions lasting 90 minutes each run once a week over a school term.
- Held after school in a classroom.
- Two CAMHs therapists ran the group each week.

**Sample**

- Recruited from referrals to a Child and Adolescent Mental Health Service (CAMHs).
- 8 adolescents aged between 14-16 years old, three male and 5 female who had recently had treatment for a developmental and psychiatric disorders. Diagnosis included Autism and Asperger's syndrome, conduct disorder with attention deficit hyperactivity disorder, bipolar affective disorder, anorexia nervosa, social phobia and moderate depression and school refusal.
- Three participants were white British, one was Afro-Caribbean and one was Asian.
- All except for one participant had received previous treatment, psycho pharmacotherapy, cognitive behavioural psychotherapy, family therapy or a combination of the above. Three were participants received maintenance medication and two were receiving ongoing treatment with a CAHMs clinician.

**Intervention content**

- Each session included a statement of goals, review of previous session, introduction of new information and assisted practice of new task and homework. An activity based on cognitive behavioural principles for 45 minutes, followed by a coffee and biscuit break and a social period of 15 minutes, a 30 minute discussion period, including things learnt during the activity problems encountered and solutions.
- Sessions were divided by themes and progressed from exercises to engage the participants and promote group cohesion and initiate self disclosure and thinking of thoughts and feelings to skill learning such as goal setting, cognitive restructuring and anxiety management.
- Techniques were drawn from a variety of clinical models, for example the second session used solution focussed techniques with a CBT approach CBT coherence ensured by following CBT methods of clarity, collaboration and emphasis on changing unhelpful cognitive patterns.
- Session outlines were provided in the research paper.

**Methods used to evaluate the intervention**

- Quantitative and qualitative data gained.
- Quantitative: Number of sessions attended, quantitative clinical change described by a brief clinical vignette for each participant. A three point rating scale was used

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| to describe clinical change as mild, moderate and major.<br>• Qualitative: Verbal or written feedback from parents, school or the young people themselves when it was presented spontaneously and parts of clinical vignettes. |
| **Views of participants gained?**<br>• Only if presented spontaneously but not all participants, teachers or parents offered feedback. |
| **Outcomes**<br>• 6 participants made what Vickers (2002) describes as 'major improvement' and 2 participants made 'moderate improvement'**.** |

**'Cognitive- Behavioural Intervention with Aggressive Boys:**

**Three Year Follow-Up and Preventative Effects'**
**Lochman (1992)**

**Relevant Aims: p427**

1. Follow up of aggressive boys who had been treated three years earlier with a CBT anger-coping programme and compare them with untreated aggressive boys and non aggressive boys.

**Design**

Quasi experimental design using two control groups and taking pre and post measures of general behaviour deviance, self esteem problem solving and classroom behaviours.

**Intervention Context**

- Intervention group were boys identified for aggressive and disruptive behaviours 'Aggressive' boys treated with CBT anger based coping programme and compared with untreated aggressive boys and non aggressive boys.
- Weekly group sessions lasting for 45-60 minutes in schools over 4-5 months.
- Groups met for a total of 12-18 sessions during the year.
- Carried out in America

**Sample**

- 31 AC (anger coping) participants who had been identified by classroom teachers in Grade 4, 5, and 6 (ages 9 years to 12 years old) for aggressive and disruptive behaviours.
- UA (untreated aggressive) participants comprised of two subgroups: previously untreated aggressive boys identified by class teachers in the same way and time as AC participants and other boys who had equivalent levels of peer rated aggression as AC participants.
- 62 NON (non aggressive) participants identified as aggressive by less than 7% of male peers.
- Specific ages or means of age are not presented in this article

**Intervention content**

- Session content included: establishing group rules and reinforcements which were contingent to following the rules, using self statements to inhibit impulsive behaviour and to screen out distracting thoughts on motor, memory and social tasks., identifying problems and children's perspectives and intentions in pictures and actual problem solving situations, generating solutions and consequences to solutions for pictured and actual social situations, viewing videotapes of children modelling awareness of physiological arousal , self statements and problem solving to cope with their anger, planning and making videos of themselves problem solving and using inhibitory self statements, using discussion, role playing and dialogue to develop children's social problem solving skills with their current and recent anger arousal problems.

**Methods used to evaluate the intervention**

- Statistical analysis was performed on quantitative data.
- Intervention effects were tested with a multivariate analysis of covariance (ANOVA) using five standardised scores for general behaviour deviance, self esteem problem solving and classroom behaviours were dependent variables and race and verbal IQ were covariates. The independent variables were the three

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| participant groups (AC, UA and NON) |
| **Views of participants gained?**<br>No record in this study of pupils views being gained at three year follow up or prior to this. |
| **Outcomes**<br>• Three years after the intervention participants in AC group displayed lower rates of alcohol and drug involvement and higher levels of self esteem and social problem solving skills when compared with a group of untreated boys (UA).<br>• Participants were not significantly different from previously non aggressive boys (NON) on these variables.<br>• The intervention had less effect on general behaviour deviance and did not produce significantly lower rates of delinquency than the level displayed by UA.<br>• Inclusion of a booster intervention produced lower levels at follow up of passive off task behaviours |

**'An evaluation of a short cognitive behavioural anger management intervention for pupils at risk of inclusion'**
**Humphrey and Brooks (2006)**

**Relevant Aims: p.9**

1. Is a short cognitive behavioural anger management intervention effective in reducing behaviours in a group of pupils at risk of exclusion?
2. What factors facilitate or impede the progress of pupils on the programme?

**Design**

- Quasi experimental. One group time series design.
- A single group phase change design was implemented pre intervention (base line data), intervention data and follow up data (post intervention) was collected.

**Intervention Context**

- For pupils at risk of exclusion
- Four week intervention programme comprising of 6 one hour sessions
- Intervention ran during school hours and pupils were withdrawn from school lessons to take part.
- Carried out in a Secondary School

**Sample**.

- 12 adolescents between the ages of 13 and 14 years old with a mean age of 14 years and 2 months who were from a North West of England Secondary School
- 4 girls of Black British origin, 2 boys of African origin, 3 boys of White British origin.
- Sampled purposely from the general school population by teachers who were asked to nominate individuals most at risk of permanent exclusion because of anger management difficulties.

**Intervention content**

- The main elements underpinning the programme were cognitive and behavioural components anger and techniques to manage anger.
- Focussed on teaching participants problem solving skills and strategies which was hoped would help them to control their anger more effectively in the face of conflict.
- Sessions explored: what anger is, why we need it, when it becomes a problem, how we can control anger by recognising signs of anger in ourselves, triggers that make us angry, developing self instruction and relaxation techniques.
- Solution focussed techniques were used to facilitate the application of newly acquired skills.
- Sessions included whole group, small group and individual discussions, games and exercises.
- A whole group review was conducted at the end of each session
- Feedback from an early session showed that participants valued discussions where they were able to share their thoughts, feelings and experiences and so this became a central method of delivery.

- **Methods used to evaluate the intervention**
- To answer research aim 1 quantitative methods were used. The Revised Rutter Teacher Scale for School Age Children (RRTS) was completed at four week intervals by form tutors of participants involved in the intervention. This has 59 item measures to assess the frequency of negative emotional outbursts, behavioural

conduct, inattentive/hyperactive behaviour and prosocial behaviour. A composite score of total difficulties can be calculated.

- Qualitative data was collected in the form of naturalistic, non participant observations which were carried out during and following each session. These observations were used to supplement outcome measures from the RRTS. The observer was a therapist with experience of anger management interventions which involved adolescents and made narrative record field notes during and following each session. These observations collected information about the processes involved in the intervention which was useful in answering research question 2: What factors facilitate or impede the progress of pupils on the programme?
- Qualitative semi structured interviews were also used to explore issues which the researchers deemed too complex for an experimental approach. These interviews were also used to collect data in response to the second research aim. The interview schedule was devised with the aim of prompting participants to reflect on the intervention process, particularly on issues which they felt facilitated or impeded the intervention.
- Qualitative data was analyses and interpreted in accordance to current guidelines for qualitative research as explained in Pidgeon & Henwood (1997), Denzin and Lincoln (2000) and Charmaz (2003).

**Views of participants gained?**

- Participants' views were gained during semi structured interviews and sometimes through session observations.
- Teachers' views were not gained through discussion.

**Outcomes**

- Statistical analysis showed a significant reduction during the course of interventions for 'total difficulties' on the RRTS. This reduction was not maintained at follow up and even though there had been a reduction 'total difficulties' still remained within the clinical significance range on the scale throughout the different phases of the study.
- Analyses of conduct, emotional and pro-social domains on the RRTS showed evidence of maintenance of positive outcomes. The inattentive/hyperactive domain remained stable throughout the baseline, intervention and follow up period and the researchers claim that this was because the content of the intervention did not explicitly tap into this domain.
- Researchers conclude that these outcomes suggest that short tem cognitive behavioural anger management programmes are effective in helping people control and understand their anger.
- Themes were found which influenced the success of the intervention these were issues of power, gender, sharing and treatment readiness.

**Appendix 3: Using the Ideal Self (Moran, 2001)**

- During the initial session the participants were asked to use a black pen and A4 paper, which was positioned horizontally, to draw a person they would not like to be and then associated objects and images which were important in that person's life.
- The participant was then asked to draw the kind of person they would like to be and associated objects and images.
- These drawings were discussed and the researcher labelled them using the language that was spoken by the child.
- The two A4 pieces of paper were then positioned infront of the child. The image of the 'person they would not like to be' was placed on the left of the child and the 'person they would like to be' on the right of the child.
- A third piece of plain A4 paper was introduced and a scaling line drawn across the page. The 'person they would not like to be' was written on the left hand side of the scaling line and the 'person they would like to be' was written on the right hand side.
- The participant was then asked to mark with a cross where they were in terms of the construct of self (person not like to be and person like to be) and questions were used to elicit information as to why they have placed themselves on that point on the scaling line.
- Four weeks after the intervention had finished the scaling line was reviewed and participants were asked to place themselves on the line denoting whether they were

nearer to the person they wouldn't like to be (non ideal self) or the person they would like to be (ideal self) .

- A range of questions were asked to establish why they have moved nearer to their non ideal/ideal self or stayed the same. The questions are included in Appendix 4.
- Their comments were categorised into contexts and mechanisms using aspects of Pawson and Tilley's (1997) Realistic Evaluation technique

**Appendix 4: The structure of the review meeting and a summary of questions used to elicit programme participant's perspectives of the intervention and mechanisms, contexts/outcomes which facilitated and impeded their progress.**

- Review meetings were carried out individually with each of the participants.
- The review meeting was conducted in a relaxed fashion.
- The researcher (Y) explained to the participants that she thought it was important that they had a chance to meet with her to discuss how they were feeling at school now that the intervention has finished and whether they had noticed any changes in themselves.
- The researcher also explained she wanted to find out what they had thought about the intervention, whether they had enjoyed it and whether they had found it useful.
- The researcher told participants that she wanted to hear how they felt and would not mind if feedback was not favourable. She stressed that she wanted to hear what the participants honestly felt.
- Participants were informed prior to the review session that they would be asked to speak with the researcher at a later date about their views of the intervention.
- Before the review meeting started each participant was asked by the researcher whether they would give there permission/consent to discuss their thoughts about the intervention with the researcher.
- They were told that if they did not want to answer a question they could say 'no', shake their head, stand up and leave. They could also stop talking to the researcher at anytime. The researcher would stop asking questions and would not be upset by this in any way.

- The researcher came prepared with a list of questions (summarised below) but other questions may have been asked depending on the conversation which occurred with each participant. Therefore, the main questions below were asked in a semi-structure interview style.(Robson, 2002)
- During the review meeting the Ideal Self work (Moran, 2001) completed during the initial session was produced by the researcher. The researcher recapped on the work and went through points that had been identified on the scaling line.
- Conversation was elicited between the participant and the researcher in a relaxed and informal way.
- Participants were asked where they would place themselves on the scaling line after the intervention had finished. They were asked whether they were 'in the same place', 'nearer to the person they would not like to be' or the 'person they would like to be'?
- Once the participant had indicated verbally and through marking the scaling line where they considered their behaviour was now they were asked a range of questions. These questions were asked in a conversational style and language may have been altered so that the participants clearly understood the questions.

1. You have told me that you have moved up the scaling line/moved down the scaling line/stayed in the same place. What were you like before? What are you like now?

2. Was there anything in the intervention that helped you move closer to the 'person you would like to be'? What was it? How did it help?

3. What parts of the intervention did you enjoy? Not enjoy?

4. Was there anything in the intervention which you felt did not help you? What was it? How was it unhelpful?

5. Were there things that X and Y did during the intervention which helped you? What were these things?

6. Were there things that X and Y did during the intervention which did not help you? What were these things?

7. Was there anything that happened that you didn't think was planned into the sessions that helped you/you enjoyed? What were these?

8. Was there anything that happened that you didn't think was planned into the sessions that didn't help you/you didn't enjoy?

9. While the intervention was taking place did anybody else help you/not help you move along the scaling line? How did they help?

10. While the intervention was taking place did anything else help you/ not help you move along the scaling line?

## Appendix 5: Session Plans

| Reference to part of session and page number of work sheet (Stallard, 2002b) | **Session 1**<br>Aims<br>To introduce core elements of thoughts, behaviour and feelings and explore how they impact on each other. | Resources | Homework |
|---|---|---|---|
| <u>Introduction (X and Y)</u><br>(5 mins)<br><br><u>Formation of Group Identity</u><br>(10 mins) (X and Y)<br><br><u>Group Activity</u><br>Naming and discussing feelings | • Introduction.<br>• Pupils share their names and something interesting about themselves. Write names on labels<br>• Explain purpose of the group.<br>• Discuss with Chn hopes and worries- what do they hope to get out of the group, what are they worried might happen in the group or after the group?<br><br>• X and Y work with Chn to brainstorm ideas for group rules.<br>• X to scribe on flipchart.<br>• These rules will help control impulsive behaviours. Any infringements of the rules should be referred back to the Chn in the group to discuss actions/consequences of behaviour.<br>• Can Chn choose a group name or be thinking of a group name for next session?<br>• Explain the purpose and use of the 'talking dragon'<br><br>• Y to discuss work they have done previously with X particularly the emphasis on feelings.<br>• Chn to think of a feeling and a situation when a person could have felt that way. If a person is feeling sad what might they look like? | *Talking dragon<br>*Flip chart<br>*Marker pens<br>*Sticky labels for names<br><br>*Thoughts, feelings and what you do p46<br>* Negative Trap p47<br>*p49 | Y explains that she wants the Chn to become personal scientists or detectives and investigate things that make them feel good- Things that make them feel unpleasant- Things they would like to do<br><br>Would like the Chn to |

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|---|---|---|---|
| (15 mins)<br>(Y)<br><br><br><

| Reference to part of session and page number of worksheet (Stallard, 2002b) | **Session 2**<br>Aims<br>• To understand what automatic thoughts. | Resources | Homework |
|---|---|---|---|
| <u>Introduction</u><br>(5 mins)<br>(X)<br><br>Review of homework<br>(10 mins) (Y)<br><br><br><br><br><br><br><u>Group Activity</u><br>(20 mins)<br>(Y)<br>p. 51<br><br><u>Individual Activity</u><br><u>(20 mins)</u><br>p63 and p64 (Xand Y)<br><u>Plenary</u><br>(10 mins)<br>p61 and p62<br>p.59 and p.60<br>(Y) | • Welcome group.<br>• Ask Chn to remind us of the group rules<br>• Facilitate a warm up game where Chn are to say their name and one positive thing about themselves.<br>• Look at hmwk together or if it has not been done complete some examples together.<br>• Ask the Chn to think about their thoughts, feelings and behaviour and how these link with the activity they have chosen.<br>• Ask Chn if they remember last session's objective and remind them they were exploring how thoughts, feelings and behaviour impact each other.<br><br>• Discuss automatic thoughts and hot thoughts<br>• Fill in diary sheet together with an e.g. from member of group<br>• Chn think of a situation specific to them: what are their 'hot thoughts'?<br><br>• If we identify the negative thoughts about ourselves then we can start to recognise that they are not helpful or true<br>• Fill in thought bubble about unpleasant thoughts about myself and worrying thoughts about myself<br>• Fill in thought bubble-nice thoughts about self and future<br>• Explain hmwk<br>• Share thoughts about future if Chn feel comfortable with this. | *Talking dragon<br>*Flip chart<br>*Pencils<br>*Markers<br>*p 51<br>*p59-64 | *p59 and p60<br>Use diary sheet to track automatic thoughts |

| Reference to part of session and page number of work sheet (Stallard, 2002b) | **Session 3**<br>Aims<br>• To support the Chn in thinking about their behaviour, feelings and thoughts and how they impacts on themselves and others<br>• To be able to understand the concept of cognitive distortion and identify types of cognitive distortion. | Resources | Homework |
|---|---|---|---|
| <u>Introduction</u><br>(5 mins)<br>(X and Y)<br><br><u>Review of homework</u><br><u>(10 mins)</u><br><u>(Y)</u> | • Welcome group.<br>• Ask Chn to remind X and Y of the group rules<br>• Play warm up game. 'Consequences.' Facilitators throws ball to a child and makes a statement. The child has to think of possible consequences of the statement e.g. 'Sanjay shouts out in class', Ray keeps talking to his friend', 'Matt pokes Sara'<br>• Play again and encourage Chn to think of how this behaviour affects themselves and others<br><br>• Recap on automatic thoughts and negative automatic thoughts.<br>• *(they pop into our heads, can be negative or positive, can stop us doing things, make us feel unpleasant, cant be easily turned off, seem true but are they?)*<br>• Look at hmwk together or if it has not been done complete egs together.<br>• Ask children to discuss their hot thoughts and how these linked to situations and feelings.<br>• Encourage children to use problem solving skills to re examine their hot thoughts. Could there have been other explanations for their feelings/situations? | *Talking dragon<br>*1 Ball<br>*p.69-73<br>*Balanced thinking thought diary- hmwk | Complete balanced thinking sheet p.86 (Stallard, 2002b)<br>Goal Getter sheet. (Appendix 1.5)<br>Sheet |

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|---|---|---|---|
| <u>New topic</u><br>(35 mins)<br>(X and Y)<br>p.69 – p.73<br><br><br><br><br><br><br><br><br><br><u>Plenary</u><br>(10 mins)<br>(X and Y) | • Thinking errors. Divide the six thinking errors between the group 2 per pair. Ask children to read them and think about what they mean. Have they egs of when they thought this way?<br>• As a group share all the different thinking errors with one another:<br>• The downers, blowing things up, predicting failure, feeling thoughts, setting yourself up to fail and Blame me.<br><br>• Ask whole group to feed back on what they have discovered about themselves. Do they seem to have a specific pattern of thinking error?<br>• Normalise this process by asking X and Y to feedback as well.<br>• Identify the thinking error. Now that we know it is a thinking error does it become less likely to happen?<br><br>• What have they learnt?<br>• How can this help?<br>• Explain homework | | |

| Reference to part of session and page number of work sheets (Stallard, 2002b) | **Session 4**<br>Aims<br>• To review work on automatic negative thoughts and cognitive distortions<br>• To plan a behaviour experiment that will help them to monitor their thoughts, feelings and behaviours in class. | Resources | Homework |
|---|---|---|---|
| <u>Introduction</u><br>(5 mins)<br>(X and Y)<br><br><u>Group Activity</u><br>(15 mins)<br>Review of past sessions<br>(X and Y)<br><br><br><br>Review of homework<br>(10 mins)<br>(Y) | • Play adaptation of 'Things I do' from Squires (2001) Play 3 rounds. Chn complete sentences: Things I do badly are, things I do well are, things I do *really* well are<br><br>• X asks the Chn to recap on what automatic thoughts are and stress that hot thoughts are the ones that we are likely to act on. What are their automatic hot thoughts- e.g. I'm bored, I will fail etc.<br>• Y: As a group recap on thinking errors work from last week. The downers, blowing things up, predicting failure, feeling thoughts, setting yourself up to fail and Blame me. Did they experience any of these thinking errors last week?<br><br>• What targets have children chosen to work on (Hmwk). Share these with each other.<br>• Discussion: What are the Chn usually getting in trouble for?<br>• How often does this happen? How do they feel, what do they think?<br>• Explain the importance of sharing these targets with their class teacher and showing them that they will be completing a behavioural experiment.<br><br>• Discuss the process of self monitoring with the Chn and explain | *Talking dragon<br>* Proforma letter to teacher<br>*Behaviour experiment plan pack<br>*Stickers for chn to use when conducting behavioural experiment | Carry out behavioural experiment. Make notes of teacher reactions and their behaviour. |

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| <u>Self monitoring</u><br><u>(10 mins)</u><br>(Y)<br><br><br><br><br><br><br><br><u>Individual Activity</u><br><u>(10 mins)</u><br>(X and Y supporting)<br><br><br><u>Plenary</u><br>(10 mins)<br>(Y) | that they are going to have to think about their behaviour in class.<br>• They may need to come to school with a watch and check what they are doing every 10 mins<br>• They will then need to think about whether they are achieving their targets and reflect on how they felt when they achieved their targets/did not achieve their targets.<br>• They will need to fill in what they did when they did/did not achieve targets. What their teacher did/did not do and what their class mates did/did not do?<br><br>• Children fill in letter to teacher explaining the behavioural experiment and create an action plan for the behavioural experiment<br><br>• Explain homework to Chn<br>• Ask Chn to share their action plans with each other and feed back on what their homework is to check understanding. | | |

| Reference to part of session and page number of work sheet (Stallard, 2002b) | **Session 5**<br>Aims<br>To recognise why problems may happen and to learn strategies to help problem solve difficult situations. | Resources | Homework |
|---|---|---|---|
| <u>Introduction</u><br>(5 mins)<br>(Y supported by X)<br><br><u>Review of homework</u><br>(10 mins)<br><br><u>New topic</u><br><u>Group and pair work</u><br>(30 mins)<br>**p.165-166**<br>Y to work with pupil N<br>X and Y | • Welcome group and ask Chn to remind us of the group rules<br>• Y will read out a list of situations, thoughts and feelings. Chn to identify on whiteboards what they are.<br><br>• Children to discuss with each other how they got on with the behavioural experiment.<br>• What went well- were their any difficulties?<br>• Did it help with meeting their targets? What did their teachers say? What did they think and feel? Did they think it wouldn't work and feel frustrated so they didn't try it out?<br>• What would they do differently if they had to do it again?<br>• Feed back as a whole group<br><br>PROBLEM SOLVING<br>• Y asks Chn what kind of difficulties they experience at school: (being unfairly told off, staying in their seat, coping with teasing etc.)<br>• Y explains that when problems happen we need to think of ways to solve them. We think about what we will do and say. Some times we will make the right choice and sometimes we won't. Some people seem to make more wrong choices and it is important to think about why this happens.<br>• Y explains that people may make the wrong choices because they may act without thinking, feelings take over, cant see another solution etc. (p.165-166)- X and Y read out examples | *Talking dragon<br>*Problem solving sheets from Stallard (2002) P167-171 cut out egs so that Chn can have a copy<br>*P174 independent activity<br>P169 and 176 (hmwk) | *Problem solving activity p.169 example and 176 exercise<br><br>*Try the STOP, THINK GO technique this week and see if it helps them to solve problems. |

| | | | |
|---|---|---|---|
| p.167-171<br><br>Y<br><br><u>Individual</u>(10 mins)<br><u>P.174</u> | • X asks Chn to talk with the person next to them about problems which they may have at school.<br>• X asks Chn to think of one problem each and to discuss why it happens with their partner. Partners to contribute with ideas as to why difficulties might happen.<br>• Chn to focus on what their thoughts and feelings might be when they have difficulties in school.<br>• X to signal swap over time after 5 minutes so that the other person can discuss their difficulties.<br>• Feedback as a group<br><br>STRATEGIES<br><br>• X and Y discuss problem solving strategies with Chn.<br>• E.g. it is useful to STOP (Red), THINK (Amber), GO (Green) so that you don't rush into solve the problem-.(Imagine a traffic light when you have a problem and when its red take deep breaths and calm down so that you will be able to think of what to do.)<br>• X gives out coloured strips (red, amber and green). Explain could put coloured stripes around a pencil at school to remind you to do this.<br><br>• Hand out range of scenarios from 167-171 and ask each child to read them<br>• Prompt Chn to 'Identify solutions', 'think through consequences', 'remind yourself what to do'<br>• Go through pg 169 look for different solutions | | |

| | | | |
|---|---|---|---|
| <u>Plenary</u><br>(10 mins)<br>P171 | • Children to complete identifying possible solutions on their own.<br>• As a group Y to go through visualisation technique<br>• P171- change the ending, listen to stories with eyes closed and imagine situations. Plan to be successful (X) Talk yourself through it (Y)<br>• Explain hmwk | | |

| Reference to part of session and page number of work sheet (Stallard, 2002b) | **Session 6**<br>Aims<br>To review why problems may happen and learn strategies to help problem solve. | Resources | Homework |
|---|---|---|---|
| <u>Introduction</u><br>(5 mins)<br>(Y)<br><br>Review of homework<br>(10 mins)<br>(Y)<br><br><u>Group Activity</u><br>(15 mins)<br>(X and Y)<br><br><u>Individual Activity</u><br><u>(20 mins)</u><br>(X and Y)<br><br><u>Plenary</u><br>(10 mins)<br>(X and Y) | • Discuss last session's behaviour (Which was quite disruptive), What did they do? Why? What were they thinking and how did this make them feel and then what was their behaviour like? What were the consequences?<br><br>• Can children remember why problems may occur? (Act without thinking things through, feeling take over, cant see another solution) Can children think of a problem they have had and why it may have happened?<br><br>• How can children solve these problems? Discuss changing the ending, plan to be successful, talk yourself through it. Turn the volume down, feeling strong room and thought stopping. Give Chn Stop, Plan, Go strips and explain that they should stick them on their pencils.<br><br>• Chn design a poster of what they have learnt and record tips and strategies that might help them in the future.<br><br>• Chn share posters with each other explaining what they have learnt from the sessions.<br>• Hand out participation certificates and praise children for attendance and skills learnt. | • Talking dragon<br>• A3 paper felt tips<br>• Congratulation certificates<br>• Stop, think , go strips | None |

**Appendix 6: Group rules that were generated from consultation with participants involved in the intervention.**

- What people share during sessions will not be shared with people outside of the group. (Unless something has to be reported because some one is in danger)

- People in the group will show respect for one another by listening to others when they are speaking.

- People in the group will try to understand that everyone is an individual with their own thoughts and feelings.

- During group discussions people will speak when they have the 'talking dragon' unless X and/or Y indicate otherwise.

- Behaviours which the group feel are inappropriate will be discussed as a group and the school's behaviour policy will be followed, as necessary.

- Hands and feet will be kept to ourselves.

# CHAPTER FOUR

# EXPLORATION OF THE IMPACT OF A CHRONIC MEDICAL CONDITION ON A PRE-SCHOOL CHILD AND THEIR FAMILY AND INVESTIGATION OF THE CONTRIBUTION AN EDUCATIONAL PSYCHOLOGIST CAN MAKE AT VARIOUS ECOLOGICAL LEVELS

## ABSTRACT

This Professional Practice Report (PPR) explores the contribution that an Educational Psychologist (EP) can make to meeting the needs of a child with a chronic medical condition and their family. The PPR uses aspects of Woolfson et al.'s (2003) problem analysis framework as a springboard to identify and explore problem dimensions at a range of ecological levels.

The PPR begins by offering a contextual backdrop which provides an overview of X's (child with a chronic medical condition) referral and the aetiology of his medical condition. The Woolfson et al. (2003) framework is then used to identify a range of problem dimensions which impact on X at the present time and are expected to impact on him in the near future. After identifying problem dimensions which impact on X directly, the PPR concentrates on exploring how an EP can impact at a macro system level, through for example, affecting ideologies and sharing knowledge of government guidance and legislation. The PPR then explores the psychological impact of having a child with a chronic medical condition on the family (a micro-system).

The PPR concludes by noting that the Woolfson et al. (2003) framework was useful in supporting identification of problem dimensions at a range of ecological levels. The report also finds that EPs can impact positively at a range of ecological levels. Further research, which evaluates the effectiveness of the Woolfson et al. (2003) framework from parents' perspectives, and explores how EPs can include the voice of the child in their work, is recommended.

# EXPLORATION OF THE IMPACT OF A CHRONIC MEDICAL CONDITION ON A PRE-SCHOOL CHILD AND THEIR FAMILY AND INVESTIGATION OF THE CONTRIBUTION AN EDUCATIONAL PSYCHOLOGIST CAN MAKE AT VARIOUS ECOLOGICAL LEVELS.

## 1. Introduction

Nabors et al. (2008) write that psychologists working in schools are able to contribute greatly in addressing the educational and psychological needs of children with chronic health conditions. This professional practice report (PPR) will explore what the needs of a pre-school child with a complex and chronic medical condition might be. The child, who will be referred to as X throughout this PPR, has a rare inherited metabolic syndrome which is known by a number of names including, Morquio Brialsford Syndrome, Morquio Syndrome, MPS IVA or MPS IV B. Throughout this PPR the condition will be referred to as MPS IVA.

A literature search conducted in June 2008 using the University of Birmingham's online database showed a dearth of articles relating directly to MPS IVA. The articles which were found focussed on the aetiology of the syndrome as opposed to exploration of the psychological impact of having the syndrome on the child and family or an investigation of professional's roles in supporting the needs of the child and family.

The PPR will begin by offering a contextual backdrop which provides an overview of X's referral and the aetiology of MPS IVA. To add an original contribution to knowledge, aspects of Woolfson et al.'s (2003) problem analysis framework will be used by the author, a trainee educational psychologist (TEP), as a springboard to identifying difficulties which may face X and his family at the present time and when he enters an educational setting. This PPR will argue that educational psychologists (EPs) can offer important support for children with chronic illness and their families at various ecological levels (Bronfenbrenner, 1977, 1979).

## 2. Definitions of chronic illness

Perrin et al. (1993) define chronic medical conditions as those which have lasted or are expected to last more than 3 months. They explain that the definition encompasses conditions such as asthma and diabetes and less common conditions caused by genetics or birth defects. Eiser (1993) explains that chronic conditions vary enormously, in terms of their aetiology, stability and predictability. However, she explains that they cannot be cured. Thompson and Gustafson (1996, cited in Naboras et al. 2008) add that chronic medical conditions have debilitating symptoms and Mc Carthy et al. (1993) explain that children with chronic conditions face a number of challenges. Kaffenberger, (2006) writes that the challenges they face can hinder participation at school.

## 3. Background information

X was referred to the Educational Psychology Service (EPS) when he was 2 years and 6 months old. The referral sheet indicated other professionals who were involved with X and his family and pointed out that X had recently received a diagnosis of MPS IVA (described below). X's priority areas of concern were identified as being physical difficulties and language delay. Brief additional notes were included in the referral form and these were that X's condition impacted on all the bones in his body and so his physical difficulties would have implications when he attended school. Other notes were that in the future X may develop enlarged kidneys and liver. It was also indicated that X would have a considerably reduced life expectancy. A visiting specialist teacher had referred X to a Pre-school liaison group, who then referred X to the EPS. She had attached information concerning targets X was working on and had completed a developmental assessment of him using a Pathways Assessment (Birmingham Specialist Support Services, 2002).

The Pathways Assessment (Birmingham Specialist Support Services, 2002) was useful in helping the author to gain a preliminary idea of X's strengths and areas of need. It showed that X was able to eat foods with a spoon and he was beginning to try to remove unfastened clothing. The Assessment suggested that cognitively X was developing age appropriately. However, in terms of language skills, independence and self help skills X was functioning below what would be expected of a child his age. In terms of his gross motor skills X was beginning to demonstrate some difficulties and his individual education plan (IEP, DfES, 2001b) indicated that he had undergone recent surgery (although the specifics of this were not included). X was unable to walk upstairs on his own but could do

so if his hand was held. Although he was able to walk unaided for short distances he tended to balance himself against furniture and needed to pull himself up from the floor by holding onto somebody or something. The IEP (DfES, 2001b) review form indicated that X had recently undergone surgery to decompress his spine and was scheduled to have further surgery which would involve rods being implanted and fused across his back. Following this X would need to have surgery on his neck and legs. X was receiving a range of medication, mostly to manage pain.

Therefore a range of information was known about X prior to meeting him. This information proved useful for the author to begin to gather information about X's condition and hypothesise how his condition may be impacting upon him and his family. As the condition was not known to the author prior to the case being referred she undertook some further research, which is presented below.

### 3.1 The aetiology of MPS IV

Pauli (2007) writes that the phenotype of MPS IV is dwarfing bone dysplasia. He explains that bone dysplasias are a heterogeneous group of disorders which come about from abnormal bone and cartilage growth and function. They are genetic and mostly result in extremely small stature (dwarfism). Pauli (2007) comments that, as with most clinical genetic conditions, practically none of the bone dysplasias have any published studies about how to manage and care for individuals with the condition. Pauli (2007) explains that this is because most bone dysplasias are rare. The impact of this in terms of research is

that individual settings do not care for many individuals with the same disorders and so it is challenging to carry out controlled studies.

Lankester et al. (2006) also describe MPS IV. They explain that it is a rare inherited metabolic syndrome with only one in 40,000 people suffering from the disease. The Developmental Disabilities Handbook (The University of South Dakota, School of Medicine and Health Sciences, 2003) estimates the prevalence to be in the range of 1 in 40,000 to 1 in 200,000 births. Therefore, suggesting potentially fewer people have the condition than suggested by Lankester et al. (2006). Lankester et al. (2006) write that the syndrome is found in all ethnic groups.

Lankester et al. (2006) write that MPS IV is caused by a specific lysosomal enzyme defect that leads to an incomplete breakdown of complex proteoglycans. This causes an accumulation of glycosaminoglycans (previously known as mucopolysaccharides) in cells, blood and connective tissue that interferes with cell function and causes disease symptoms. Lysosomal enzymes, which are defective in individuals with MPS IV, are needed to break down molecules called glycosaminoglycans. These are long chains of sugar carbohydrates in each of our cells that help build bone cartilage, tendons, corneas, skin and connective tissue. There are two types of MPS IV. Type A is considered to be a more severe form and that there is a deficiency in chromosome 16q. Type B appears to be rarer with a deficiency manifesting in chromosome 3p. (Lankester et al. 2006) X has a diagnosis of MPS IVA.

Lankester et al. (2006) and Chudley (2002) explain that the inheritance pattern is autosomal recessive and so parents are unaffected by the disease. The International

Morquio Organisation (2008) explains that autosomal recessive means that to develop the disease an individual must inherit two mutated copies of the gene one from each parent. Laboratory diagnosis is possible by detection of enzyme deficiencies. This allows pre-natal diagnosis in subsequent pregnancies.

### 3.2 The effects of MPS IV in children

Lankester et al. (2006) and Chudley (2002) describe the range of effects of MPS IV in children. They both note that these include severe growth retardation, usually with a disproportionate short trunk, a large head, short neck and a prominent Maxilla (upper jaw) with wide spaced teeth. Chudley (2002) writes that the adult height of individuals with MPS IV is between 82 and 115 centimetres.

Other effects of the syndrome described by Lankester et al. (2006) are genu valgum (knock knees) odontoid hypoplasia (underdevelopment of the odontoid process which can lead to instability of the cervical spine at the junction with the skull), hip dysplasia and skin and joint laxity. The combined range of physical and other abnormalities leads to what Lankester et al. (2006 p.129) describe as a 'duck waddling' gait. Further difficulties caused by the syndrome are corneal clouding, deafness, aortic incompetence and hepatomegaly (enlarged liver) (Lankester et al. 2006 and Chudley, 2002).

Lankester et al. (2006) comment that growth and development is normal within the first year or two of life and diagnosis is usually made between the ages of 2 to 4 years old. MPS

IV can be distinguished from other mucopolysaccharidosis (MPS) syndromes as children have normal mental functioning and do not have coarse facial features (Mikles and Stanton, 1997 cited in Lankester et al. 2006). Chudley (2002 p. 439) however writes that individual's facial features may be 'mildly coarse.'

### 3.3 Treatment for individuals with MPS IVA

Chudley (2002) writes that MPS IV is well known to paediatricians and geneticists, although it is rare. However, Pauli (2007) takes the standpoint that little is known about the effectiveness of interventions. Pauli (2007) explains that for individuals with MPS IV there seems to be universal agreement that surgical intervention should be undertaken. He explains that early treatment is thought to be effective but points out that the rigorous assessment of alternative interventions has not been carried out. In Pauli's (2007) opinion intervention seems to be carried out on grounds of reasonableness rather than on evidence based data.

Lankester et al. (2006) note that treatment for MPS IV is supportive only. They write that children with MPS IV will need a regular range of movement exercises as well as night splintage so that progressive lack of motion is limited. Lankester et al. (2006) write that spinal surgery is often carried out for children with MPS IV and when the child undergoes surgery (as X has done) careful anaesthetic planning must take place because of cervical instability, silent aortic incompetence and respiratory deficiencies caused by spinal and thoracic deformities.

### 3.4 Prognosis for individuals with MPS IVA

As this section has illustrated MPS IV results in permanent and progressive cellular damage which affects 'appearance, physical abilities, organ and system functioning' (International Morquio Organisation, 2008). Saint Louis University (2008) quotes Dr Tomatsu who is a leading practitioner researching treatment for MPS IV and an associate professor of paediatrics at the university. Dr Tomatsu states that MPS IV is a "devastating and systemic bone disease" and that there is at present "no real treatment." He comments that the only treatment at present is orthopaedic surgery. Dr Tomatsu explains that as individuals with MPS IV age they may suffer from serious heart valve and lung diseases. He states that if individuals with MPS IV receive health care and orthopaedic surgery they may live between 30 and 40 years. However, if individuals do not receive treatment they are expected to live into their 20's or 30's.

Lankester et al. (2006) and Chudley (2002) support Dr Tomatsu. Lankester et al. (2006), for example, comment that the lifespan for individuals diagnosed with MPS IV is variable depending on the severity of the disease but many individuals with MPS IV will only live until early adulthood. Chudley (2002) agrees writing that many individuals with the syndrome die in their second and third decade of life.

## 4. Using the Statutory Assessment process (DfES, 2001b) to meet X's needs

As Section 3 has demonstrated, MPS IV is a rare and complex syndrome. This suggests that it has the potential to affect X and his family in a multitude of ways. Asprey and Nash

(2006) note that a large number of people with life-threatening and limiting conditions have a Statement of Special Educational Needs (DfES, 2001b) to support their access to education. The DfES (2001a) document makes specific reference to pupils with degenerative medical conditions pointing out that they may require special consideration when educational support or intervention is considered providing examples of the need for professionals to liaise regularly and for reviews of educational and other provision to occur more frequently.

In view of the complexities of X's condition, it is likely that he will undergo a Statutory Assessment to determine whether he requires a Statement of Special Educational Needs (DfES, 2001b). One way EPs can contribute to meeting X's needs at an individual level is through their involvement in this process. The DfES (2001b) states that the EP's involvement in the Statutory Assessment procedure will involve them using their knowledge and understanding of child development to help to determine whether a Statutory Assessment is necessary and to identify appropriate interventions or strategies to meet the child's needs. The Psychological Advice supplied by an EP is often used by the local authority to guide them on the type of provision a child may need (DfES, 2001b). With this in mind, it is argued that EP's must have a clear understanding of what the child's needs are.

### 4.1 Using conceptual frameworks to inform holistic psychological formulation

Holistic identification of a child's needs for Psychological Advice is important, but this is not always straightforward. Cameron and Monsen (2005 p.288) explain that when a child

has reached the Statutory Assessment stage their difficulties are 'likely to be complicated and messy.' They suggest that the Statutory Assessment process can be informed by employing a conceptual framework. They use a 'problem analysis framework' (Monsen et al. 1998) to clarify case details and test guiding hypotheses. Cameron and Monsen (2005) explain that organising case details logically can help to reduce complexities. They comment that conceptual frameworks should provide an outline of the main aspects of the problem situations and illustrate how dimensions may interact with one another.

Woolfson et al's (2003) integrated framework comprises of five phases and has developed the Monsen et al. (1998) model. Kelly (2006) describes the model as collapsing the steps in Monsen et al's (1998) model but not replacing them. Kelly (2006) points out that Woolfson et al's (2003) model is based more directly on the work of Bronfenbrenner (1979) than the Monsen et al. (1998) model because it emphasises transactional layers of eco-systemic problem solving.

Bronfenbrenner (1977, 1979) has been well famed for his ecological approaches to understanding child development. He explained that children grow up in a complex social environment or social ecology, which is part of a larger social system. He conceptualised various systems that are active in a person's life. These systems are illustrated by his model of four concentric circles.

The central circle is made up of components that Bronfenbrenner (1977) refers to as microsystems. These systems include settings in which people have direct personal experience, for example, school, family and job settings. Bronfenbrenner (1977) describes

the second concentric circle, the mesosystem, as being a system of microsystems. For example, a mesosystem could encompass interactions among family, school, and peer group. Bronfenbrenner (1977 p.515) writes mesosystems are the 'interrelations among major settings containing the developing person at a particular point in his or her life.'

Bronfenbrenner (1977) describes exosystems as an extension of mesosystems. He cites the neighbourhood, national and local government, and transportation as exosystems. Bronfenbrenner's (1977) provides some explicit examples of macrosystems: laws, regulations, and rules. However, he emphasises that the majority of macrosystems are unconsciously in the minds of society members. They exist as ideology, which is noticeable through customs and practice.

Woolfson et al.'s (2003) model draws on Bronfenbrenner's (1977,1979) approach by requiring users to conceptualise and analyse problems at different ecological levels examining 'within child' factors such as biological diagnosis, as well as encouraging users to explore factors affecting problems at a family, school and community level.

During Phase 2 of Woolfson et al's (2003) model users are required to work together to gather information at a range of ecological levels. This information helps to create an initial picture of challenges. During this phase the EP assists stakeholders in evaluating the validity of their perceptions and encourages participants to search for supportive evidence. In this way hypotheses are generated and confirmed through data collection and investigation. Confirmed hypotheses are known as problem dimensions. Problem dimensions impact on the individual at different ecological levels. Table 1.0 illustrates

potential problem dimensions at a range of ecological levels. To inform the problem analysis the author used information gathered from X's referral, the Pathways Assessment, (Birmingham Specialist Support Services, 2002) Individual Education Plans (DfES, 2001b), observations of X in the home setting and consultation with X's mother and his support worker.

During Phase 3 of Woolfson et al's (2003) framework, the EP reflects on gathered information and hypotheses and analyses how problem dimensions relate with each other. The problem analysis should be shared with stakeholders so that priority areas for intervention can be identified. Figure 1 exemplifies how problem dimensions impact on each other.

There are two caveats to this analysis which should be borne in mind. Firstly, as X is a pre-school child, he has not yet entered an educational setting. The author has looked forward to the near future when X will begin attending an educational setting and has drawn on her knowledge and experience of working with children with complex needs. Hence, some identified problem dimensions are hypothetical.

Secondly, the author was conscious that X's parents had very recently received a diagnosis of X's syndrome. Pianta et al. (1996) write that the diagnostic process, which can often be prolonged can be traumatising for parents. A consultation with X's key worker informed the author that she considered X's parents to be in a state of bereavement and therefore the author did not judge it an appropriate time to share the problem analysis with them.

Thus, in this instance, the initial problem analysis (see Table 1.0 and Figure 1) was used to help the author begin to gain a holistic understanding of X's needs in anticipation of the Statutory Assessment process. It has not, at the time of writing, been shared with X's parents. However, this may happen in the future.

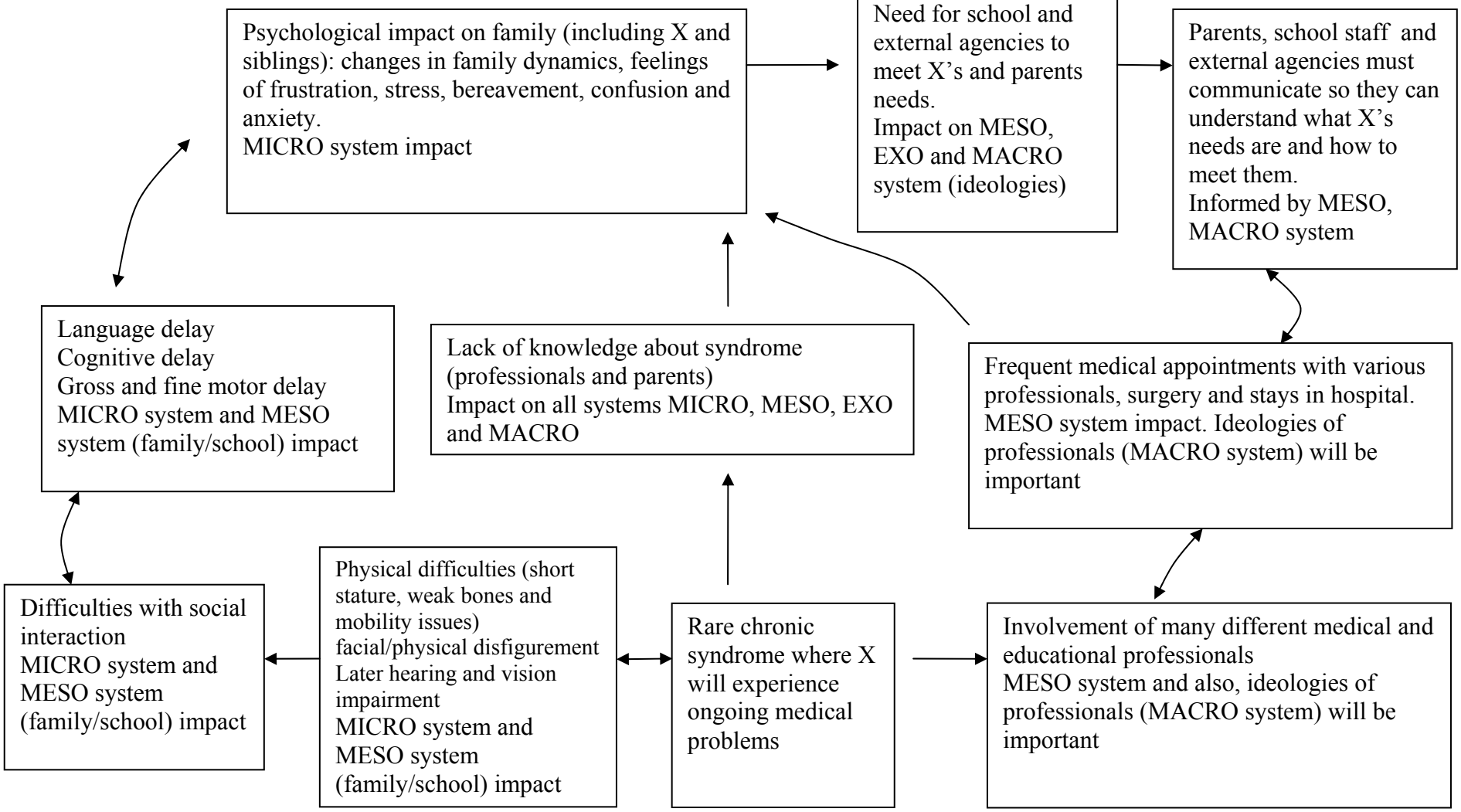
This PPR argues that using a conceptual framework such as Woolfson et al.'s (2003) model can help to develop a holistic understanding of what X's needs are at a range of ecological levels (see Table 1.0). Moreover, an understanding of how problem dimensions impact upon each other can also be developed (See Figure 1).

**Initial identification of potential problem dimensions at a range of ecological levels**

| Ecological Level and Problem Dimension Theme | Example of Problem Dimension |
|---|---|
| MICRO<br>Psychological impact on family (including X and siblings) | - Changes in family dynamics, feelings of frustration, stress, bereavement, confusion and anxiety. |
| Impact on learning, social interaction and emotional well being | - Language delay<br>- Gross and fine motor delay<br>- Difficulties with social interaction<br>- Physical difficulties (short stature, weak bones and mobility issues)<br>- Facial/Physical disfigurement<br>- Later hearing and vision impairment |
| | - Lack of knowledge about syndrome |
| MESO and EXO<br>Impact of X's condition on other micro-systems such as the family and school. | - Bracketed factors above will have an impact at a meso system level.<br>- Range of micro systems must connect and communicate (Parents, school and external agencies) so they can understand what X's needs are and how to meet them.<br>- Frequent medical appointments mean that micro-systems will meet. |
| | - Lack of knowledge about syndrome impacts on meso and exo system activities |
| MACRO<br>Importance of policy and ideologies | - Need for school and external agencies to meet X's and parents needs.<br>- Parents, school staff and external agencies must communicate so they can understand what X's needs are and how to meet them. The way they communicate will reflect aspects of their ideologies and belief systems. |
| | - Lack of knowledge about syndrome |

**Table 1.0 illustrates initial identification of potential problem dimensions at a range of ecological levels.**

**Figure 1.0 Problem Analysis of X's condition**



### 4.2 Problem analysis summary

Table 1.0 and Figure 1 have illustrated that Woolfson et al's (2003) problem analysis can be useful in identifying problem dimensions at a range of ecological levels and exploring their interconnectedness. Information gained from the problem analysis could support an EP's Psychological Advice (DfES, 2001b) as Cameron and Monsen (2005) suggest, and could also indicate potential areas where EPs could contribute at individual, group or organisational levels. For example, difficulties which arise from X's medical condition, such as gross and fine motor delay, social interaction difficulties and language delay impact on X at an individual level. An EP would be able to consult with X, school staff and X's family, to provide advice and/or training on interventions and approaches which could help X make progress in these areas.

The problem analysis has also identified the psychological impact of X's condition as a problem dimension. Factors such as family stress and anxiety can be categorized as problem dimensions impacting on the micro system (predominantly X and his family). Problem dimensions such as the need for X's school to be able to meet his needs and the need for knowledge about X's syndrome to be made available, as appropriate, to school staff and external agencies can be categorized at meso, exo and macro system levels (Bronfenbrenner, 1977).

Shannon and Posada (2007) cite the DfEE (2000) and Mackay (2002) which suggests that EPs continue to carry out predominantly individual level and statutory work to the detriment of

organisational level work. They discuss how the DfEE (2000, cited in Shannon and Posada, 2007) recommends that EP work should increasingly involve supporting the family. Therefore, rather than explore how an EP can support X through one to one casework the remainder of this PPR will focus on how EPs can contribute to supporting macro system work (impacting on ideologies and policy) and work with the family (micro-system level work).

## 5. Roles for EPs in supporting the inclusion of children with chronic medical conditions

The problem analysis (see Table 1.0 and Figure 1) indicates that it will be important for schools to communicate with parents and external agencies to meet X's needs. How X's school conceptualizes his needs, government legislation and guidance are factors which can be categorized at the macro-system level (Bronfenbrenner, 1977). In order to ensure X's inclusion the school will need to engage with a particular ideology. The impact of the macro-system problem dimensions will be explored more fully in the next section, alongside reflection on the contribution EPs can make.

### 5.1 Raising awareness of government and local authority guidance and legislation

Asprey and Nash (2006) explain that young people with complex medical conditions have a high level of need in the educational system. Research findings exemplify some of these needs. McCarthy et al's research (1996) shows that school staff recognised that health concerns could have a psychological impact on children, making comments related to children's self esteem, levels of frustration and depression. Harris and Farrell (2004) discuss how illness causes disruptions to normal life experiences for a child. They give disruption to their education as a prime example, explaining that repeated interruptions to schooling can take place if the child suffers from a chronic illness. Asprey and Nash (2006) support Harris and Farrell (2004) stating that young people with life limiting/threatening conditions often have frequent and/or prolonged periods of absence from school. This may be due medical treatment, infections, attendance at hospital appointments and recovery from illness as well as lack of appropriate support at school.

Harris and Farrell (2004) explain that absence from school can result in children feeling or being excluded from the education system. Asprey and Nash (2006) found that parents of 34% of the children in their sample said that the school or college did not keep in touch with them or their child during their child's periods of absence. Bolton (1997, cited in Asprey and Nash, 2006) documents negative effects of absence such as underachievement and psychological factors such as disrupted peer relationships and emotional problems such as reduced self-esteem.

In order to meet the needs of children with chronic medical conditions the government has created a range of policies and guidance materials. Asprey and Nash (2006) cite a range of government policies from 1997 to 2005 such as DfEE (1997, 1998), DfES, (2001, 2003, 2004) and DfES & DoH (2005). The National Service Framework for Children (DoH, 2004) was created to ensure educational inclusion in mainstream settings for children with complex needs. Government legislation such as The Special Educational Needs and Disability Act (SENDA, 2001) and the Disability Discrimination Act (DDA, 2005) also protects children and young people with disabilities being prevented from accessing mainstream education. This legislation strives to ensure that children with disabilities are accepted and included in mainstream settings.

The DfES (2001a) guidance forms part of a joint approach by the Department for Education and Skills (DfES) and the Department of Health (DoH) which clarifies the importance of health and education to the well being of children and young people. It promotes equal access to education for all children and young people. The document explains that

> the emphasis on continuing learning applies equally to those with physical or mental health problems and pupils with life threatening or terminal illnesses, all of whom have the right to education suited to their age, ability, needs and health at the time. (DfES, 2001a p.4)

Aspey and Nash (2006) carried out semi-structured interviews with 46 parents from ten local authorities in England. A wide range of topics were discussed but their 2006 paper focuses on issues of awareness and communication. Research findings from Asprey and Nash (2006) demonstrate that awareness of the needs and difficulties of children with chronic conditions is lacking in mainstream educational settings.

This is supported by the Ofsted (2003) document which describes findings from an evaluation of the provision in 12 local authorities for children with medical needs since the DfEE (1996) and DfES (2001a) guidance. It examined 50 settings that children with medical needs accessed. The evaluation found that most local authorities and their schools showed little awareness of the guidance. It did note that special schools were better informed than mainstream. X's local authority was not included in Asprey and Nash's (2006) research or in the Ofsted (2003) research and this may mean that the results of this research are limited in terms of transferability.

Therefore, although government legislation and guidance has sought to meet the needs of children and young people whose medical needs make accessing education challenging Asprey and Nash's (2006) research suggests that there is a lack of knowledge and understanding about childhood illness, in some mainstream educational settings. The Ofsted (2003) report also notes this and states that local authorities have a major role to play in ensuring that disruption to education for pupils with medical needs is minimised and that there is continuity in pupils' learning.

The DfES (2001a) guidance suggests that in order to facilitate effective communication local authorities should have one or more named EP designated to work with hospital teaching services and liaise with the EPS and other support services as necessary. This PPR argues that a role for EPs who do not have a specialised remit could be to ensure that the school settings they work with are aware of current government legislation and seek to ensure inclusive practice in their schools. This could be achieved through consultation activities with staff, teacher training and facilitating conversations with staff and parents.

### 5.2 Sharing knowledge of models of disability and their possible impact on school ethos, policy and practice

Aspey and Nash (2006) suggest that an explanation for the lack of awareness on how to meet the needs of children with chronic conditions is that there has been a tendency within education to reject the medical model of disability and at the same time not fully embrace the social model of disability. Eiser (1993) explains that the medical model categorises children with medical conditions into groups and attributes children's difficulties to the medical condition. Eiser (1993) explains that solutions to meeting the child's difficulties include gaining access to the correct medical treatment.

Davis and Watson (2001) explain that a limitation of the medical model of disability is that young people can be conceptualised only by their medical condition. Therefore, school staff, peers and others could focus on the deficits or difficulties of children with chronic conditions rather than their abilities. Bailey and Barton (1999) add that if educational establishments follow a medical model of disability teachers may feel that responsibility for child welfare lies with health professionals. This could potentially result in school staff being less active in facilitating inclusion for the child.

The social model of disability argues that individuals who are different find themselves 'oppressed by societal views of normality' (Llewellyn and Hogan, 2000 p.159). Thus, disability is socially constructed. Difficulties arising from it are viewed as the responsibility of society and its conceptualisation thereby de-emphasising the individual. Davis and Watson (2001) argue that this model should be adopted in educational settings because it leads

thinking about difficulties a young person may face to problems that exist in the school system, and the attitudes and actions of people in the school setting.

Part of Graungaard and Skov's (2006) research exemplifies the contrasts between medical and social models of disability. Graungaard and Skov's (2006) found that parents indicated disturbing differences in how they conceptualised their child and how medical professionals did. For example, they note that parents tended to focus on the child's possibilities whereas doctors discussed the child in terms of their disabilities. Parents reported, through indepth interview, that they felt this approach misrepresented their child, treating them as a case rather than an individual.

Asprey and Nash (2006) believe that in order for young people with chronic conditions to be included successfully in mainstream education both models of disability need to be taken into account. They explain that schools need to have an awareness of individual children's health needs without using this to label or pathologise them. They also need to be able to identify problems in the education system in terms of attitudes and practices which may be unhelpful.

This PPR argues that EPs need to ensure they have knowledge of both medical and social models of disability. Supple (2005) writes that the traditional medical model may have precedence in today's society but explains that members of the disability movement are strongly advocating the social model. EPs are in a position to facilitate forums where issues encompassed in these models are explored with school staff. This activity has the potential to affect school ethos, attitudes towards the inclusion of children with chronic conditions and policies. Therefore, consultation of this kind can impact at a macro-system level.

### 5.3 Educational psychologists working with school staff in an inter-agency capacity

Clay (2004) explains that nearly every teacher will come into contact with pupils with medical conditions during their career. McCarthy et al (1996) carried out exploratory research gaining educator's views of working with children with chronic conditions. The sample comprised of 23 teachers and 6 head teachers employed in rural and urban settings. Methods involved using semi structured audio-taped telephone interviews which included questions on experiences of children with health conditions, concerns about providing educational services to these children, resources used by the educators and recommendations about how information and services can best be provided to them.

Before presenting the research findings it is important to note some limitations of the study. Firstly, the research took place in America and therefore attitudes towards children with chronic medical conditions may differ from those in England (where X lives). Also, the interviews were conducted over the telephone. This method could be criticised because interviewers would not have been able to pick-up on non-verbal signs such as facial expression and initial reactions to questions. Although, one could counter argue that interviewees may have been more relaxed when talking over the phone as opposed to face to face with a researcher. Also, a content analysis was performed on transcribed data and matrices were constructed for each topic area. This was performed by the three authors and three nursing students. The extent of inter-rater reliability is not presented.

It should be noted that when participants were asked what concerns they had in providing education to children with chronic conditions, approximately half the interviewees stated they had none. At this point they were prompted using pre-determined probes. From the results of the study it seems that all the responses are in relation to the probes which they were presented with. Concerns which were identified were medical emergencies, absenteeism, impact on learning and behaviour, communication with parents and peers relationships. It is possible that the participants felt compelled to make comments in response to the probes. This has the potential to reduce the validity and reliability of responses.

McCarthy et al (1996) were surprised that only a few examples of children with chronic illness being victims of 'teasing or other peer difficulties' were noted by the participants in their sample. They make reference to a previous study of theirs where school nurses reported that they often observed children with chronic conditions being victims of 'teasing.' They also note that the unclear term 'teasing' needs to be clarified.

Particiapnts in McCarthy et al's (1996) study reported that input from school nurses on the medical conditions affecting children in their care was perceived to be useful but they only wanted information that was specific to their class. This PPR suggests that, depending on the individual condition, it may be important to inform the whole staff rather than just class teachers. In this way there may be a greater chance of informing ideologies which exist within the school system. For example, to support X and ensure his safety in the school environment it may be necessary to consult with the whole school staff. However, information sharing on a whole school basis needs to be carried out ethically, for example by gaining parental and

child permission and working collaboratively with the child and family who have the chronic condition.

McCarthy et al. (1996) report that the educators in their study were not well prepared to notice or manage changes in a child's learning or development that were linked with their chronic condition. They recommend that nurses, psychologists and educators work together to clarify the impact that a child's condition may have on their abilities to learn. Phelps (2006, cited in Nabors et al. 2008) supports McCarthy et al. (1996) agreeing that psychologists working in school settings can contribute to facilitating communication between various stakeholders to ensure the needs of children with chronic conditions are met. Farrell and Harris (2003) explore best practice examples in delivering effective services to children with medical needs and identify effective partnership and collaboration as a key finding of their research.

### 5.4 The importance of effective EPS service delivery for X and his family

The problem analysis identified family stress as a problem dimension. With this in mind it is important to think about how an EP can deliver their services to ensure they are supporting families and not adding to potential stress and anxiety they may be feeling. EPS interactions with the family can be conceptualised at the meso-system level (Bronfenbrenner, 1979).

There exists guidance for EPs about how to work with parents. The DfEE (1997) recommended that parents be given choice about where their children are educated, have confidence instilled in them that their child's needs will be met and work in partnership with professionals sharing their knowledge of their children to ensure effective provision. More

recently, the Code of Practice (DfES, 2001b) reiterates the knowledge that parents have about their children and stress the importance of professionals engaging with them and working collaboratively.

Together from the Start (DfES, 2003) also recognises the importance of effective service delivery and partnership working from professionals in order to meet the needs of children with disabilities and their families. The document provides information about barriers to effective practice from parent's perspectives. Some of these barriers include lack of sensitivity at the time of diagnosis, inconsistent patterns of service delivery, lack of co-ordination between different service providers and exclusion from mainstream and community services.

Cuckle and Bamford (2000) carried out research that evaluated an EPS from parent's perspectives. Five hundred questionnaires were sent out to a random sample of parents. The questionnaires and letters were printed in English, Urdu, Gujarati and Punjabi. The questionnaires gathered general views on the EPS and the response rate was 17%. Telephone interviews were also carried out with 30 parents. Cuckle and Bamford (2000) acknowledge that there will be local variations in responses to parental surveys. However, they comment that there are likely to be issues from their research that would be relevant in other local authorities.

Cuckle and Bamford (2000) found that most satisfaction was expressed for the early years services where a Statement was not involved. Cuckle and Bamford (2000) identified some dissatisfaction with the EPS concerning communication. Particular themes were a lack of information about procedures and the length of time they would take, a need for clearer

explanations, earlier help, lack of responsiveness from psychologists and information about reviews, and repetition of questions by the different professionals involved. Other sources of dissatisfaction were the length of time taken to collect the relevant reports to draw up a Statement of Special Educational Needs (DfES, 2001b).

Parents in Clarke et al's (2008) study describe circumstances in which professionals gave them information in technical terms, were not told what they could expect to happen, or where to turn for help. They stated the importance of sensitive delivery of accurate information using language they could understand. The need to explain information in accessible ways is also made by Davies et al. (2003). They describe how one parent commented that medical terminology was not understood by them and commented that the term cerebral palsy was 'an alien word'.

These findings have implications for casework with X because, as discussed earlier, the severity of his condition means that it is likely he would require a Statement of Special Educational Needs (DfES, 2001b). This means that X and his family could have prolonged involvement with the EPS. Therefore, making it important to think about how an EP can work effectively with parents. Although Cuckle and Bamford's (2000) research was not carried out in the local authority in which X was receiving EPS support, their research can offer useful guidance for EPs engaging in complex pre-school work. Points such as the need for parents to understand the roles of different services they are involved with, for them to feel able to share their knowledge about their child, to understand the stages of the Code of Practice (DfES, 2001b) and the need for professionals to understand parents' expectations so that parents can feel they are being helped all have important implications for EP practice.

## 6. Exploration of the psychological impact of X's condition on his family

The DFES (2003) imparts that it is important for EPs to be sensitive and understanding of the psychological impact a diagnosis may have on the family. The international Morquio Organisation (2008) draws attention to some of the psychological issues which surround individuals and their families who have MPS IV. They bullet point the following issues as part of an educational presentation about the syndrome: depression, despair, changes in family dynamics and guilt. The final section of this PPR will explore the potential psychological impact on X's family using the rationale that if EPs are to adopt a supportive role for the family they must understand the range of emotions a family may be experiencing.

### 6.1 Emotional reactions of parents

Pianta et al. (1996) explain that learning that one's child has a disability or chronic illness can be traumatic to the care giving system because it challenges parental beliefs and expectations. They explain that parents associate learning of their child's diagnosis with a sense of loss, trauma, and report grief reactions that are similar to bereavement. Pianta et al. (1996) also cite findings by Blacher (1984), Bowlby (1980), Burden and Thomas (1986) and Waisbren (1980) who describe the range of feelings parents of children with chronic illness may experience when they discover a diagnosis. These include feelings of shock, denial and emotional disorganization where feelings such as, anger, guilt, disillusionment and adjustment or acceptance are experienced. Eiser (1993) explains that with hereditary conditions (X's condition is autosomal recessive, as explained previously) parents may feel responsible for the

condition thus feeling guilty. Graungaard and Skov (2006) found that parents who discovered there child have severe disabilities felt a strong sense of powerfulness and uncertainty.

Part of Webster et al's (2008) study assessed parental stress in a cohort of school-age children who had been diagnosed at a preschool age with either global developmental delay or developmental language impairment. Webster et al. (2008) found it important to investigate the impact of a child's disability on parental stress levels noting that previous studies had concentrated on evaluating outcomes associated with a preschool diagnosis of developmental disability on the child's later development and function. A limitation of the research in terms of this PPR is that the children in the research would have been older than X. Even so, Webster et al. (2008) found that nearly half of the parents in their sample had clinically significant levels of parenting stress.

Webster et al's (2008) research supports Eiser (1993 p.11) who explains that 'diseases which threaten children's autonomy and compromise their life-expectancy challenge our emotions and coping resources to their limits.' She comments that parents of toddlers report more stress than parents of older children. Beckman (1991, cited in Webster, 2008) explains that parents with children with disabilities have greater demands placed on their time compared to parents of typically developing children. Eiser (1993) provides examples of activities which could contribute to increased levels of stress: frequent hospital appointments, diagnostic procedures, multiple treatments, added financial cost, arrangements for special transportation and added time to help children complete personal care tasks. She describes that separations from parents for medical treatment can affect trust and attachment in children, which can in turn

cause stress and anxiety in parents. Eiser (1993) also notes that the future of children with some chronic conditions is unpredictable. This level of unpredictability can add to stress and anxiety within the family.

Symptoms associated with a chronic syndrome may also trigger emotional reactions in the child, family and wider community. As discussed earlier, MPS IVA results in coarse facial features, extremely short stature, a short neck and a large head. These aspects of X's condition are therefore immediately noticeable to the eye. Although, O'Dell and Prior (2005) write that researchers do not agree about the psychological effects of disfigurement on children and young people they note that research has provided evidence of psychosocial difficulties including anxiety and social isolation. Adrianssens, (1987, cited in O'Dell and Prior, 2005) writes that teachers and other adults can behave in over-protective ways, which prohibit the child learning social interaction and independence skills. Therefore, X's disfigurement may create protective feelings in adults (including X's family) which affect their behaviour towards him.

### 6.2 Coping strategies

Eiser (1993) points out that it is sometimes assumed that all loss and illness results in mourning reactions and that recovery happens over a period of time. She makes reference to stage based models stating that this type of model can lead to expectations that there are correct and incorrect ways to respond to chronic illness. She states that some parents will feel distressed for long periods of time and special occasions such as birthdays can enhance

feelings. Eiser (1993) also discusses linear approaches, citing Spinetta (1981) who emphasises that families can experience a series of 'ups and downs' (Eiser, 1993. p.99).

Traditional approaches to understanding parental reactions of parents of children with chronic illness may have focussed on maladjustment and the difficulties parents raising children with chronic illness faced (Eiser, 1993). However, there is now a trend towards thinking about how parents cope. This is because despite the mound of challenges facing parents caring for children with chronic illnesses, many parents cope extremely well. Eiser (1993) explores strategies that parents adopt to help them. These include turning to God and searching for positives. She Graungaard and Skov (2006) discovered that parents can use problem solving strategies which involve seeking out and collecting information, engaging in investigating alternative medicine, seeking second opinions, learning new skills and controlling professional's actions and decisions. Thus, perhaps involvement in a problem solving framework such as Woolfson et al's (2003) model would be well received.

Eiser (1993) also cautions against assuming that coping well is the norm. This is because this may disable empathetic approaches towards parents who are finding it more challenging to cope. In regards to X during a consultation X's mother confided in the TEP stating that she used her religion to help support her.

### 6.3 Changes to family dynamics

Webster et al. (2008 p.32) write that 'chronic disorders are known to have a wide-ranging impact on overall health and family dynamics.' Eiser (1993) writes that every member of the child's family will be affected as a result of the child's chronic diagnosis. Pianta et al. (1996) cite a family systems approach discussed by Marvin and Stewart (1990, cited in Pianta et al. 1996). This approach explains that relationships, for example between partners, friends, support networks and colleagues, can play an important role in helping parents to understand experiences associated with having a child with chronic illness. Pianta et al. (1996) notes that research suggests that spousal relationships are particularly important.

Davies et al.'s research (2003) explores changes within family systems. One set of parents reported that caring responsibilities were putting a strain on their marriage. A father also reported that he was unable to cope with his wife's inability to accept a diagnosis which resulted in him leaving the family home.

Clarke et al. (2005) found that mothers generally have responsibility for the child's medical care at home and accompany their children to hospital. This finding is supported by Eiser (1993). She recognises that often mothers feel isolated in caring for their child and fathers may manage their stress by separating themselves from family life whereas women may feel more able to seek social support. Eiser (1993) also explores the father's role she explains that often they are assigned or assign themselves to a supportive role rather than a central role. Eiser (1993) states that an important factor between the parents relationship is how comfortable they feel with the division of labour, for example, whether they believe that

responsibilities in the family home, including caring for their chronically ill child is shared equally.

Eiser (1993) writes that mothers are often more involved in research than fathers. Mothers tend to be available to take part in research during working hours and few systematic studies of father's perceptions and strategies to cope with their child's illness have been conducted. Therefore, it is unclear whether points described above would be endorsed by fathers of chronically ill children. Eiser (1993) notes that more research is needed to explore the role of fathers. However, recent literature searches seem to indicate that mother's reactions are still focussed on more than fathers (Clarke et al. 2008).

Lastly, it is important to recognise the impact of chronic illness on siblings within the family. Eiser (1993) discusses this in depth noting that the presence of a sibling with chronic illness in a family system presents as a risk factor. However, she notes that reactions in siblings vary enormously with some siblings illustrating through behaviour, emotional and academic difficulties, the challenges associated with having a sibling with chronic illness. Other siblings seem to adjust well. She notes that the age of siblings may be an important factor in how well they adapt. For example, young children may not be given information about their sibling's diagnosis and/or miss out on interactions with their parents at important times in their life.

Coddington (1972, cited in Eiser, 1993) writes that having a sibling with chronic illness can be extremely stressful for healthy children in the family system. Eiser (1993) explains that parents may not share the diagnosis or its implications with siblings in an attempt to protect them. It is hypothesised that this process of shielding can be stressful for parents and also for

siblings who may be aware that their sibling is unwell but not be informed of why and what to expect. Eiser (1993) describes that opportunities for interaction between siblings may be minimised because of a sibling's chronic illness and older siblings may adopt a care giving role. When there are several siblings without chronic illness in the family they may be able to offer each other support.

### 7. The Role of the EP

Eiser (1993) explains traditionally the role of the psychologist has been to intervene during crises. However, she suggests that early intervention by psychologists is important. The above discussion illustrates that roles for EPs may include helping families discuss diagnoses with the child and siblings and offering emotional support to the family, child with chronic illness and their siblings, as appropriate. This could be achieved through staff training, or individual casework using, for example, Personal Construct Psychology (Kelly, 1955). Moran, (2001) has used this approach to gain insight into children's worlds as a way to helping them to understand and manage their emotions.

Systems Theory is explained by Ayers et al. (2000). They write that a family can be regarded as a system where changes in subsystems (such as the behaviour of siblings, mother or father) can affect other parts of the same system. Working with families, using elements of Systems Theory (Ayers, 2000), may be beneficial to the family. This approach may help families to understand why changes have occurred in family relationships and support them in finding solutions to challenging family dynamics.

This section of the PPR suggests that complex casework of this nature requires EPs to use a range of skills, including sensitivity and tact, an ability to view situation from a range of viewpoints and a willingness to engage with research in order to better understand rare and complex conditions, sharing findings, as appropriate, with the family.

## 8. Conclusions

Cameron and Monsen (2005) recommend using a conceptual system as a basis in which to examine complex casework. This PPR used the Woolfson et al. (2003) model as a springboard to support a TEP's understanding of casework and to encourage exploration of the ways in which EPs can contribute at a range of ecological levels (Bronfenbrenner, 1979).

Evaluation of the framework from parent's perspectives has not yet been carried out. Therefore, future research could focus on sharing the problem analysis framework with X's parents and for them to be involved in evaluating its usefulness. It is hypothesized that parents may benefit from using the conceptual framework, with the support of an EP. They may, for example, feel it helps them make sense of complex issues affecting their family. Using a conceptual framework with parents may also help to ensure transparency in the EP approach and encourage trust between parents and the EP.

Research reviewed during the course of this PPR, for example work by Asprey and Nash (2006), O'Dell and Prior (2005), Graungaard and Skov (2006), Davies et al. (2003) and Clarke et al. (2008), has concentrated on gaining the views of parents or school staff as opposed to the views of children with chronic illness. Although X is too young, at present, to

engage with the Woolfson et al. (2003) model it seems important that future EP research gains the perceptions of young people with chronic medical conditions. Mortimer (2004) for example, explores ways in which very young children can be actively included in planning for their needs. Future research could explore children and young people's perceptions of their chronic condition.

Using Woolfson et al's (2003) framework encouraged holistic examination of the case work. Problem dimensions at the micro, meso, exo and macro system levels which were affecting X now and could affect him in the near future were found. This PPR demonstrated that EPs can impact positively on problem dimensions at a range of ecological levels (Bronfenbrenner, 1977). For example, an EP can work at a macrosystem level by contributing to Statutory Assessment (DfES, 2001b), sharing government policy and guidance with school settings and informing and possibly changing ethos and ideology. An EP can use their knowledge of Models of Disability to ensure that children with complex needs are included in educational settings. At a meso and exo system level EPs can work with parents, school staff and other agencies ensuring that communication is effective and parent's opinions are valued.

The psychological impact of having a child with a chronic medical condition on the family has also been explored. EP's engaging in this type of complex case work need to be sensitive to the range of emotions parents of children with chronic medical conditions may be experiencing. This is particularly important, if, as with X, the parents have recently been informed of the diagnosis and its implications. It is hoped that EPs will use their training and skill set to respond creatively and flexibly to the needs of children and their families who are living with chronic illness.

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# CHAPTER FIVE

# A REFLECTIVE REVIEW OF EDUCATIONAL PSYCHOLOGY CASEWORK AND EXPLORATION OF SYSTEMS CONCEPTS THAT MAY HAVE IMPROVED CASEWORK OUTCOMES

## ABSTRACT

This Professional Practice Report (PPR) provides a reflective review of a piece of longitudinal educational psychology casework. The author recognises that although hypotheses leading to a behavioural intervention were confirmed by key stakeholders, the approach to intervention implementation was too directive.

The author provides a critical perspective on systems models and their evolution and argues that concepts from systems engineering (Jenkins, 1972, Gillham, 1978) could have been usefully applied in order to: define the system under study and wider system issues, and support collaborative working so that intervention objectives had the consensus of stakeholders, and met the needs of the system. The author also demonstrates that concepts from General Systems Theory (von Bertalanffy, 1968) such as viewing the school as an open system can support understanding of how different parts of the system impact on one another. Concepts from General Systems Theory (von Bertalanffy, 1968) including circular causality, punctuation, homeostasis and information feedback are used to analyse interactions and beliefs between individuals in various sub-systems, and to facilitate the sharing of perspectives.

The PPR concludes that had concepts from systems engineering (Jenkins, 1972, Gillham, 1978), and General Systems Theory (von Bertalanffy, 1968) been used during the course of the casework better outcomes may have been realised. Further exploration of using systems approaches within the constraints of a school system is recommended.

# A REFLECTIVE REVIEW OF EDUCATIONAL PSYCHOLOGY CASEWORK AND EXPLORATION OF SYSTEMS CONCEPTS THAT MAY HAVE IMPROVED CASEWORK OUTCOMES

## 1. Introduction

The British Psychological Society (BPS, 2007) identifies reflection as an important part of Educational Psychologist (EP) practice. Bearing this in mind, the author, a Trainee Educational Psychologist (TEP), will reflect on how she delivered Educational Psychology Services (EPS) during a piece of longitudinal casework. The casework, outlined in this Professional Practice Report (PPR), aimed to address concerns a primary school had for an eight year old child (X) with a range of complex individual needs. This PPR will begin by describing the casework referral and how EPS services were delivered. The author will then argue that systems concepts, particularly those from systems engineering (Jenkins, 1972, Gillham, 1978), and General Systems Theory (von Bertalanffy, 1968) could have been used to inform and guide the casework. This PPR will aim to add to the extant body of knowledge by using an example of educational psychology casework and examining how systems concepts can be applied.

## 2. Case work referral

The TEP became aware of X when she attended an Annual Review (DfES, 2001). The purpose of the Annual Review was to discuss X's progress with members of school staff and X's parents, and amend her Statement of Special Educational Needs as necessary. The

TEP's role at the Annual Review was to shadow her supervisor, the EP for the school. At this Review school staff strongly stated that they felt X was not making any progress and her needs could no longer be met in the school. Consequently, a change of school placement was discussed with X's mother. X's mother seemed less sure about whether or not X's needs could be met at the school but was concerned that her child was not making progress and that staff felt they could not meet her needs.

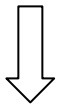
X's mother identified that a primary concern for her was that X was not speaking at school. She felt that X needed more support than what the school were currently offering and specialised input to help X speak at school. Following the Annual Review it was agreed that the TEP would work with school staff and X to explore strategies which could increase the rate of progress she was making. It was decided that following EPS intervention a meeting would be called to review X's progress.

**2.1 The TEP's conceptualisation of the decision making process informing the Annual Review**

Figure 1 shows the TEP's conceptualisation, following the Annual Review, of how the school had come to make the decision that a change of placement was necessary for X. The TEP thought that the school's conceptualisation of X's difficulties and the school's understanding of how to meet X's needs could be explored in greater detail. During the Annual Review the TEP was unable to gain a clear picture of what interventions had been trialled in order to encourage X to make progress or to increase her rate of progress. The TEP felt that further exploration of the input provided by X's school to meet her needs was

required, and if exploration showed that interventions had not been trialled this would be needed before a change of school placement was considered more seriously. In order to guide the TEP's thinking, problem solving approaches were drawn on. These will be discussed in the following section.

| **Information** | **Source** |
|---|---|
| X has significant learning difficulties | Mother, school staff , Statement of Special Educational Needs (DfES, 2001) |
| X does not speak at school | Mother, school |
| X is not making progress at school | Mother, school |
| School cannot meet X's needs | School |



**School Outcome: Change school placement**

Figure 1: The TEP's conceptualisation of the decision making process informing the Annual Review

### 3. Problem solving methods that inform educational psychology practice

Miller and Leyden (1999) write that there has been a shift in EP practice to employ psychology in a preventative rather than reactive fashion. They write that preventative approaches tend to benefit a larger number of pupils and the adults responsible for their care and education. The TEP also believed it important to work preventatively. However,

she felt that in X's case she was placed in a position which meant she had to work reactively as a problem had been made clear to her during the Annual Review (that X was not making progress in school) and a solution had been expressed by the school staff (to move X to a school for children with learning difficulties). Nevertheless, in order to start beginning to understand the situation the TEP decided to apply problem solving frameworks.

The Division of Educational and Child Psychology's (DECP) assessment framework (1999) recognises that assessment is context embedded and can generate understanding of what is happening, who is involved, why there is a problem and what can be done to resolve it. The DECP assessment framework (1999) seems to map closely onto problem solving approaches created by Woolfson et al. (2003) and Monsen et al. (1998) in that they all advocate problem clarification through consultation, assessment of a range of factors possibly contributing to the problem situation (cognitive, personal, social, environmental) and linking the selection of interventions to hypotheses, data collection and analysis. Woolfson et al.'s (2003) model is based more on the work of Bronfenbrenner (1979) than Monsen et al's framework (1998). It encourages users to explore hypotheses at various ecological levels such as at the level of the child, school, home and community.

Miller (1991) describes specific problem solving stages: identification, assessment, formulation, intervention and planning, action and evaluation. Miller (1991) writes that identification refers to identifying specific areas of concern (see Table 1.1 for the main areas of concern for X). Assessment involves collecting data through methods such as lesson observations, standardised tests and consultations with teachers and children.

Formulation involves a shared and clear agreement with teachers, which involves the EP examining information that has been collected from the assessment phase and, in collaboration with the teacher, generating hypotheses to explain the behaviour. After formulation an intervention plan is drawn up with the school and other agencies involved. During this stage realistic strategies are devised that concentrate on formulations which have been supported by assessment data. The action stage is when the planned intervention is implemented. Miller (1991) writes that psychology as a scientific discipline values measurement and evaluation and this makes up the final step.

### 3.1 Using problem solving methods in praxis

Once X's case had been allocated to the TEP she engaged in a number of actions over several months (see Appendix 1). The TEP considered that although she did not want to attribute X's difficulties at school solely to her medical diagnoses it was important to obtain an overview of X's diagnoses as part of her developmental history. Table 1.0 identifies diagnoses which were identified from X's Educational Psychology Service (EPS) file. Key points concerning the diagnoses are recorded in column 2 and the area of development the diagnoses may impact on is noted in column 3.

| Diagnosis | Information pertinent to diagnosis | Area of concern |
|---|---|---|
| **Hypotonia** | A medical term used to describe decreased muscle tone (the amount of resistance to movement in a muscle) (Babylon, 2009) | Gross and fine motor skills |
| **Microcephaly** | A neurodevelopmental disorder where the circumference of the head is more than two standard deviations smaller than average for the person's age and sex. Microcephaly stems from a wide variety of conditions that cause abnormal brain growth, or from syndromes associated with chromosomal abnormalities. In general, the prognosis for normal brain function is poor. (Wikipedia, 2009) | Learning |
| **Chromosome 8 deletion** | This syndrome involves abnormalities of hair, nose, and phalanges, microcephaly, learning difficulties and multiple exostoses (lumps on bones) (Singh et al. 2002). X had a diagnosis of microcephaly and also had learning difficulties and general developmental delay. There was no evidence of exostoses (lumps on bones) although there was some mild distortion of facial features. | Learning |
| **Developmental delay** | Children are often behind their peer level in some or all areas of development (Addenbrooke's Hospital, 2009) | Learning |
| **Selective Mutism (SM)*** | SM can be diagnosed using the following criteria from the Diagnostic and Statistical Manual of Mental Disorders (APA 2000):<br>• Consistent failure to speak in social situations, where speech is expected, despite speaking in other situations.<br>• Failure to speak persists longer than 1 | Social, emotional and behavioural Learning (SM was hindering X's ability to access all areas of the curriculum) |

| | | |
|---|---|---|
| | month (excluding the first month of school)<br>• Failure to speak is not due to lack of knowledge or comfort with the spoken language in the social situation.<br>• Interferes with educational or occupational achievement or social functioning.<br>• The failure to speak is not better accounted for by a communication disorder and does not occur during the course of: pervasive developmental disorder, schizophrenia and/or other psychotic disorder. | |

**Table 1.0: An overview of X's medical and special educational needs**

(*An official diagnosis had not been given by medical professionals.)

The TEP also felt it important to reflect on what information was missing from the school's conceptualisation of X's difficulties (see Figure 1). Therefore, in line with Miller's (1991) problem solving steps of identification, assessment and formulation the TEP gathered further information. She took guidance from Woolfson et al's (2003) framework whereby hypotheses at the individual, school and home/community level were explored. Several guiding hypotheses were established and fed back to X's class teacher, teaching assistant and X's mother. Table 1.1 shows hypotheses which were used to guide the casework and inform intervention planning. The hypotheses which were confirmed after data collection are noted by a 'yes' in the final column of Table 1.1.

| Level | Guiding Hypotheses | Information gathering | Confirmed |
|---|---|---|---|
| Individual | 1. X has multiple learning needs which affect her progress in school | EPS file information, Statement of Special Educational Needs, basic literacy and numeracy assessments conducted by the TEP, reports from other external agencies, class teacher reports | **Yes** |
| Individual | 2. X is reluctant to engage in learning activities independently | Observations at school on multiple occasions, school teacher and teaching assistant reports, reports from other external agencies who worked for the school | **Yes** |
| Individual | 3. X has selective mutism | Observations at school on multiple occasions and observation at home | **Yes** |
| Individual | 4. X is not making any progress at school | Consultation with class teachers, IEP reviews, consultation with X's mother EPS file information | No |
| Individual | 5. X is unhappy at school | Playground and class observations<br>Consultation with X's mother and class teachers | No |
| Class/school | 6. X's needs are not adequately met by the current provision in place at school | Observations at school on multiple occasions, school teacher and teaching assistant reports, consultation with X's mother | **Yes** |
| Class/school | 7. X is not provided with supported opportunities at school to achieve independently | Observations at school on multiple occasions | **Yes** |
| Home/ community | 8. X does not communicate at home | Observation at home | No |
| Home/ community | 9. X's mother is not happy with the school provision | Consultation with X's mother in the home setting and regular consultation via telephone | **Yes** |

**Table 1.1 shows guiding hypotheses which were explored in order to inform intervention planning**

### 3.1.1 An overview of problem formulation

Confirmed hypotheses included X having multiple learning needs which affected her progress at school. Class observations showed that X remained very passive and was reluctant to engage in independent work at school. She would wait for personal instructions and adult support before attempting a task. However, X seemed more confident in the home setting where she was expected to engage in activities independently.

Through consultation with school staff and observations of X in the classroom environment it became clear that the intervention in place to meet X's needs consisted of additional adult support in the afternoons. This involved the teaching assistant sitting by X and helping her to complete learning tasks. A review of the tasks presented to X carried out by the TEP showed that they were not adequately differentiated because they were either too difficult or too simplistic. The class teachers were able to report that X had learning targets identified on an Individual Education Plan (IEP, DfES, 2001) but that she had made minimal progress towards achieving these. The teachers felt this was because X was reluctant to engage independently. They reiterated during a consultation with the TEP that they were unable to provide the level of support that X needed as it was too adult intensive.

Other support X was receiving involved the teaching assistant taking X into a reception class so that she could play in a more exploratory manner. However, observations showed that X was very dependent on adult support in this setting as well. She would remain by the

teaching assistant's side and only participate in activities if the teaching assistant was with her and told her what to do.

From observing X in both home and school settings and consulting with X's mother the TEP came to the conclusion that X was displaying signs of selective mutism (SM) (see Table 1.0). X would verbally communicate freely with family members in the home setting but would not speak with school staff or family as soon as she entered school. The class teachers felt it difficult to gain an overview of what X was able to do as she did not respond to questioning. X did not communicate verbally with her peers, although she would smile frequently at them. During playground observations it was noted that peers would try and look after X by holding her hand and guiding her to play activities. Staff members were also observed holding X's hand. Both school staff and children seemed to treat X as if she was a much younger child. This may have been because of her small stature and also because she did not communicate verbally with them. Through observing and assessing X in the school context the TEP felt that although X was very dependent on staff she appeared happy in the school environment.

Johnson and Wintgens (2001) write that it is difficult to determine exactly what causes SM. They discuss predisposing and precipitating factors which can lead to a diagnosis of SM. Johnson and Wintgens (2001) write that predisposing factors such as a family history of shyness or anxiety can combine with precipitating factors such as separation and self awareness. These predisposing and precipitating factors can be perpetuated by factors such as reinforcement of the mutism through attention, lack of an appropriate intervention or the ability of the child to communicate effectively non-verbally.

Johnson and Wintgens (2001) note that anxiety is a common, if not universal, feature in children with selective mutism and refer to studies by Black and Uhde (1994, cited in Johnson and Wintgens, 2001) and Dummit et al. (1997, cited in Johnson and Wintgens, 2001) where nearly all children with SM met the criteria for social phobia or avoidant anxiety. EPS notes showed that X was an anxious child from a very young age for example, when she was a pre-school child X was reluctant to leave her parent's side at play group and would not usually engage in play or verbal communication with staff at play group or professionals who visited the home. Therefore, it seems that X may have become accustomed to displaying anxious patterns of behaviour.

It was felt that data analysis pointed towards areas of school practice that could be improved upon, for example, work could be differentiated to X's level. Although there were opportunities for X to engage in independent learning these were not scaffolded to match her developmental needs. Providing more opportunities for X to achieve independently and decreasing the behaviours which led to dependence, such as peers and school staff holding X's hand, would adjust the difference which existed between X's home and school context.

### 3.1.2 An overview of intervention planning

Although the class teachers were willing to accept EPS input and agreed on the confirmed hypotheses, the TEP was unable to secure collaborative input from the class teachers when it came to intervention planning and delivery. The class teachers stated that they felt it

would be too time consuming in view of other demands placed on their time from the Senior Management Team. They suggested that X's teaching assistant become the key person involved in planning and delivering the intervention because she supported X each afternoon. The class teachers agreed to support an intervention in the classroom as much as their time allowed.

The TEP considered this was not an ideal way to carry out an intervention because she felt that X's class teachers had overall responsibility for her progress in the classroom and so should be fully involved in the intervention process. However, the TEP decided to persist with the casework. She rationalised that once intervention implementation had begun and X was making a degree of progress the class teachers may be more willing to commit.

Over recent years there has been growing knowledge about interventions that can be used with children with SM but the possibility of non intervention has also been discussed. Cline and Baldwin (1994) summarise work by Lumb and Wolff (1988) who suggest reasons for non-intervention. They write that many children with SM will usually show normal social and occupational adjustment when followed up into adulthood, even if they have not been treated in childhood or if the treatment had proved unsuccessful. Cline and Baldwin (1994) disagree with Lumb and Wolff (1988) stating that many children with SM show normal levels of social and occupational adjustment in later life. They write that there exists a lack of follow up studies of children with SM. Interestingly, they point out that planning non-intervention does not mean that people will not intervene. They suggest that professionals, adults or children in a child's life might encourage, bribe or force a

child with SM to speak and that these adhoc approaches could be classed as interventional processes that reinforce SM.

Cohan et al. (2006) conducted a meta-analysis of literature from 1990 to 2005 which analysed different types of interventions and their effectiveness for children with SM. The results from their meta-analysis suggested that behavioural approaches were most effective. Cohan et al. (2006) limit their meta-analysis to published articles. They did not approach practitioners for 'real life' examples of successful interventions for children with SM. This may mean some successful intervention approaches were not included.

Following data collection and analysis the TEP created an intervention which drew on behavioural psychology approaches. The intervention aimed to increase X's independence and confidence in regards to completing learning tasks. The intervention included actions such as work differentiation, pre-tutoring, Precision Teaching (Lindsley, 1990) and positive reinforcement. It was considered that through these methods X would be encouraged to complete work independently and from this experience a sense of achievement. This may encourage her to increasingly engage in curriculum activities, which in turn may cause a reduction in any anxiety she felt. Additionally, it was felt that if the behaviour patterns of X and staff members changed X would need to learn new ways of accessing the curriculum. It was hoped that this would involve X speaking more in school which would allow teacher's perceptions of her to change and would also enable her to engage more with the curriculum, which in turn would increase her rate of learning. Appendix 1 provides an overview of the TEP's actions in the course of the intervention process.

### 3.2 Outcomes of TEP involvement

Nelson and Prillentensky (2005, p.4) explain that summative or outcome evaluation takes stock of an intervention to determine 'what has been accomplished, what has been learnt, and what could be done differently in the future.' Seven months after the initial Annual Review a meeting was held where it was decided that X would remain in school as she had begun to make some progress. X's mother felt that more provision was in place to meet X's needs and was happy that the class teacher had begun to set X homework. School staff felt that X had made progress with her social interaction skills. They reported that she would speak to her class teacher and to her peers although she was still hesitant and would mainly respond to questions rather than initiate conversations. They noted that X was more independent. She would, for example, begin learning tasks without being directly prompted. Although progress had been made in some areas of development the class teacher felt that X's skill levels were still considerably below her peers and that X's learning progress was still slow.

The following December concerns were raised once again about X's rate of progress. Upon investigation the TEP found that the intervention which had been introduced had stopped as the teaching assistant supporting X had changed. Although X's class teacher had remained the same, strategies which had proven successful in the past were not being used. The Special Educational Needs Co-ordinator for the school approached the TEP and intimated that a change of school placement may be necessary.

Visser (2004) writes that implementing an intervention successfully within a school system can be complex. She notes that changes at various levels of the system are required. The TEP considered that although the intervention structure had the potential to be successful she could have sought to embed it more effectively within the school system. For example, she felt that X may have made greater progress had the Senior Management Team and X's class teachers engaged more fully with the intervention. As it was, after initial consultation with X's class teachers, the TEP had worked mostly with X's teaching assistant. They had started a pre-tutoring programme, discussed behaviour management strategies and begun a Precision Teaching programme. However, this practice had not been shared with X's class teachers who were reluctant to meet with the TEP because of time pressures. The TEP felt that classroom practice and attitudes towards X had not changed significantly which hindered the progress X could make. The class teachers had not gained first hand experience of the intervention strategies which they could then explain to X's new teaching assistant.

Visser (2004) advocates systems ideas as a useful theoretical guide to intervention implementation in school settings. It is argued that had the TEP conceptualised the school as a system and worked systemically, using systems ideas inherently within problem solving and intervention planning better casework outcomes may have been realised. The remainder of this PPR will provide an overview of the evolution of systems thinking and an account of how concepts from Systems Engineering (Jenkins, 1972, Gillham, 1978) and General Systems Theory (von Bertalanffy, 1968) could have been used to guide the casework.

## 4. The evolution of systems thinking

Upon delving further into systems literature it becomes apparent that it is a complex domain inhabited by a plethora of ideas and approaches. This view is supported by Checkland (1981) who notes the wide range of activities which take place within the systems movement. Within the confines of this PPR it is not possible to discuss in depth the wide range of approaches and activities encompassed under the umbrella term 'systems approaches'. However, a brief overview will be presented.

In Midgley's (2007) opinion, since the 1940's there have been three waves of system thinking. He writes that the first wave encompassed General Systems Theory (GST), cybernetics and complexity science. Midgley (2007, p.13) writes that these approaches became prominent post World War II and describes them as 'mutually supportive fields of enquiry'. The second and third waves of systems thinking encompassed ideas from management systems approaches, ecology, philosophy and family therapy.

In terms of the first wave of systems thinking the Open Systems Group (1981) describes cybernetics as a systems concept which is concerned with the control and communication of living beings and machines. Midgley (2007) writes that one basic idea inherent within cybernetics is that of feedback. This idea can also be found within GST literature (von Bertalanffy, 1968, Dowling, 1994). Midgley (2007) writes that it can be useful to use feedback processes to aid understanding and this will be explored in section 5.2.4. Complexity science is concerned with the complexity within systems and this approach, according to Midgley (2007), may challenge the idea of sub-systems being nested within

systems, which is mentioned within GST (von Bertalanffy, 1968). Complexity science advises that analysing some relationships in terms of different levels of systems can be counterproductive because the relationships are much more complex than this. Capra (1996) advocates visualising networks of interactions, as opposed to visualising nested systems, as sometimes being a more appropriate way of understanding interactions within a system. GST will be explored further in section 5.

Midgley (2007) describes a shift in epistemological assumptions between the first and second wave systems perspectives, with the first wave of systems thinking seeking out the truth about systems and perceiving human knowledge to reflect reality and the second wave of systems thinking perceiving human beings as co-constructing social realities through discussions with stakeholders (Maturana, 1988). Thus, in the second wave of systems thinking Midgley (2007) writes that systems were construed as constructs to aid understanding as opposed to real objects. He writes that a new understanding of the term holism was generated to include gaining multiple perspectives. There was an emphasis on building shared understandings and achieving compromise with stakeholders. Criticisms were also made about the second wave of systems thinking. It was argued that sufficient attention was not paid to the inherent power imbalances which existed between stakeholders in the system, meaning that some members of the systems may not feel that they could share their views, which could lead to the views of those in authority being promoted (Midgley, 2007).

Jackson and Keys' (1984) argument brought about what Midgley (2007) refers to as the third wave of systems thinking which he summarises under the banner 'critical systems thinking.' This pragmatic approach takes ideas from the first and second waves of systems thinking. Jackson and Keys (1984) profess that both first and second waves of system thinking are important in different contexts and can be complementary to one another. Midgley (2007) states that an oversimplification of Jackson and Keys' (1984) ideas, which may nonetheless prove useful, is that first wave of systems thinking may be useful when there is agreement from stakeholders on the nature of the problem and what objectives are aimed for. He explains that second wave thinking may be useful when there is disagreement between stakeholders, as long as this is not coercive, and when discussion is needed to find solutions. He notes that when coercion is present in situations a critical systems heuristics approach, which explores boundary and value judgements, may be useful (see Ulrich, 1983, 1987).

## 5. Using key concepts from GST and systems engineering to ameliorate casework outcomes

Midgley (2007, p.28) advises those with no experience of systems approaches to 'start from where you are now' and question whether there are one or two ideas or methods that might enhance systemic awareness. Midgley (2007) advises trying to synthesise these with existing practice. This guidance from Midgley (2007) prompted the author to explore whether approaches from systems engineering outlined by Jenkins (1972) and Gillham (1978) and systems concepts inherent in GST (von Bertalanffy, 1968) could be used to support the casework outlined in this PPR.

Although these approaches can be criticised for, amongst other things, being outdated they have been chosen as a starting point to guide systems thinking for the TEP. In addition, they have been described as systems approaches which are applicable to school contexts (Dowling, 1994, Gillham, 1978, Jenkins, 1972 and Bowen, 2007).

### 5.1 Using a systems analysis framework (Jenkins, 1972, Gillham, 1978)

Jenkins (1972) and Dowling (1994) explain that a systems approach to problem analysis involves assessing problems in their overall context as opposed to in a piecemeal fashion. This is because, from a systems perspective, behaviour in one part of the system affects and is affected by behaviour in different parts of the system and so should be viewed in an interactional capacity (Dowling, 1994). Miller (2003) agrees and writes that attempting to study parts of a system in isolation will provide an inaccurate picture of the system.

Checkland (1999) identifies systems engineering as a post World War II development which focused on engineering systems to meet defined objectives. Jackson (2000) writes that although systems engineering was primarily developed for use in the engineering field it was soon realised that the approach was versatile and could be used with a wide range of systems which were made up of interacting components. Jenkins (1972) writes that systems engineering approaches advocate a unifying approach by bringing together specialist techniques used to solve complex problems.

Although problem solving models (DECP 1999, Miller, 1991, Monsen et al. 1998 and Woolfson et al. 2003) were used to inform intervention planning an approach which specifically adopted systems perspectives was not used. Gillham (1978) although writing 30 years ago, explained that ideas from systems engineering can be usefully applied in school systems. Checkland (1999) however, describes a caveat of the systems engineering approach. He writes systems engineering is;

> limited to the small subset of situations in which objectives are undisputed, so that problems are only 'how to do it?' problems, not problems of 'what to do?(Checkland, 1999, p.55)

Notwithstanding this criticism, it is argued that the framework questions outlined by Gillham (1978) and presented in Table 1.2 below could have been used to guide consultation and bring together stakeholders to create opportunities where multiple perspectives could be shared to aid understanding of activity in the system and inform the intervention approach.

Jenkins (1972) and Gillham (1978) explain that systems engineering involves 4 distinct stages which are: systems analysis, systems design, implementation and operation. Gillham (1978) writes that the stage of systems analysis is particularly useful in work which involves schools and can be further broken down into 8 distinct stages which are exemplified in Table 1.2 below.

| Stage | Process |
|---|---|
| 1 | Recognition and formulation of the problem |
| 2 | Organisation of the project<br>Organising the project and recruiting necessary stakeholders and information to ensure that the project is feasible. |
| 3 | Definition of the system |
| 4 | Definition of the wider system which contains the system being studied |
| 5 | Definition of the objectives of the wider system |
| 6 | Definition of the objectives within the system under study |
| 7 | Definition of the overall criterion |
| 8 | Information and data collection |

Table 1.2 shows the 8 stages in systems analysis (adapted from Gillham, 1978)

The problem solving frameworks discussed in section 3 of this PPR share some similarities with the systems analysis framework. They all emphasise the importance of collaborative working with stakeholders and joint problem solving. Monsen et al's (1998) and Woolfson et al's (2003) frameworks have similar stages to stage 1 and 2 of the systems analysis component where importance is given to negotiating the casework and formulating the problem situation with a range of stakeholders.

It could be argued that the systems analysis model differs from the problem solving frameworks, because it encourages definition and more detailed analysis of the holistic system and its sub-systems (stages 3-6). Stage 3 of the model, for example, involves

defining the system in precise terms and breaks the system down into sub-systems Therefore, in the context of this casework the school system might be considered to be the whole school and X's family would be a system which linked with the school system. X's classroom environment which included her peers, teaching assistant and class teachers could be viewed as a sub-system of the overarching school system.

Stage 4 involves the definition of the wider system which contains the system being studied. From the TEP's perspective, one of the wider systems which impacted considerably on this casework seemed to be government legislation and guidance in regards to raising the academic attainment of pupils. Gunter (2008) writes that a salient political issue over the past 25 years has been standards and how to bring about improvements in the curriculum and schools. It can be argued that this has led to increased pressures on schools to meet the objective of raising the academic attainment of pupils. Morris (2001) notes that from 1996 to 2001, the percentage of pupils achieving Level 4 (the national expectation) and above in Key Stage 2 tests in English rose from 57% to 75%, and in mathematics form 54% to 71%.

It seems that the wider national objective of raising standards of attainment of pupils seemed to impact greatly on X's school system because, the Senior Management Team had directed class teachers in the school to raise standards for pupils falling just below national expectations. This led to class teachers feeling time pressured and in the case of X's intervention, expressing that they felt they were unable to commit to direct engagement.

Midgley (2007) points out criticisms of early systems thinking. He questions who is to say what a system is and its definition. As noted above, he explains that the first wave of systems theory considered systems as representations of reality whereas later theories viewed them as guides to develop inter-subjective understanding. Midgley (2007) explains that theorists who assumed that systems were a representation of reality believed that the boundaries of a system were fixed rather than imposed by those analysing the situation. This view led some users of the first wave of systems thinking to believe they could gain specialist insight into complex systems and make recommendations for change.

Checkland (1981b) criticises first wave approaches for not including the views of stakeholders in planning and decision making. Midgley (2007) stresses the importance of involving stakeholders collaboratively in the analysis process and any recommendations which may arise from it. He explains that failure to involve stakeholders may mean that recommendations are not viewed favourably, not implemented or face resistance if they are implemented.

The systems analysis framework (Jenkins 1972 and Gillham 1978) does seem to involve gathering the views of a range of stakeholders and ensuring that the system under analysis is agreed upon. Taking on board Midgley's (2007) guidance the facilitator could ensure that the systems analysis framework is used flexibly so that an emphasis on collaborative working is communicated. This may alleviate some of the threats discussed by Midgley (2007).

Gillham (1978) explains that systems often have multiple objectives which can be in conflict with one another. He rationalises that in order for systems to work efficiently it is necessary to have an overall objective which may mean compromises need to be made. The systems analysis model differs from the problem solving models described in section 3 as it emphasises the importance of synthesising the subsystems so that work towards a mutually agreed objective can take place (stages 5-7). Step 6 involves the definition of the objectives within the system under study.

During involvement in the longitudinal casework X's class teachers (a sub-system) discussed barriers to their involvement. The TEP was advocating an objective which involved implementing an intervention to raise the attainment of one pupil with complex learning difficulties whereas the teachers expressed that the Senior Management Team (a sub-system) were concerned about the level of attainment of numerous pupils in the school, who did not have special educational needs, and had instructed class teachers to work towards the objective of raising standards of attainment for these pupils who were only just falling below national expectations. In view of this the class teachers felt that they were unable to devote time to X's intervention (the TEP's objective). It could be argued that the objective of the Senior Management Team was acting as a barrier for X's class teachers to engage in the casework. Following steps 6 and 7 would involve coming to an agreement on objectives with a range of members from different sub-systems. This would help to ensure that objectives were realistic, met the needs of the sub-systems and the wider systems.

It could be argued that the TEP had worked with stakeholders in only one sub-system, for example X's class teacher and teaching assistant rather than members of staff who were situated in various subsystems. The TEP, as part of her casework actions, did not speak explicitly with members of the Senior Management Team to gather their view of the system's priority objectives. It is now argued that a collaborative meeting would have allowed the TEP to gain an understanding of the objectives of the Senior Management Team and help her to understand the system's context and why there may be barriers or reluctance to engage with the proposed intervention.

In practice stages 5 to 7 of the systems analysis model may be difficult to implement. Midgley (2007) explains that the first wave of systems approaches have been criticised for considering people to be objects which could be manipulated in hand with the wider system. Checkland (1981b) explains that people within systems were not viewed as having their own goals which they may not be willing to compromise on and which may not marry well with other goals in the wider system. Midgley (2007) recognises that seeking to share multiple perspectives from different stakeholders within the system may also be challenging because there inevitably exists power imbalances between stakeholders. Taking this casework as an example, had the Senior Management Team been involved in the systems analysis with class teachers when objective compromises were needed the class teachers may have felt pressure to agree on objectives stressed as being important by their line managers. Additionally, having both class teachers and members of the Senior Management Team involved may have meant that both parties were unable to share their

thoughts about constraining factors within the system or sub-systems, especially if this involved objectives which were imposed by the other party.

Therefore, there are tensions which exist in using the systems analysis framework (Gillham, 1978, Jenkins, 1972). These tensions involve how to define a system, whether it is viewed as a real life entity or a co-constructed analogy to promote understanding of the situation. Further exploration needs to take place on how to overcome the power imbalances which may be present in stakeholder meetings so as to ensure that multiple perspectives can be shared, and how to reach agreement on which objectives to pursue and ensure that stakeholders have not felt coerced (Midgley, 2007).

Notwithstanding these tensions inherent in the model the TEP considers that it may have been useful to use the systems analysis framework (Gillham 1978, Jenkins, 1972) at least as a model to facilitate consultation amongst stakeholders and to support intervention negotiation and planning. Having an external agency such as a member from the EPS present may have enabled structured conversation to take place which brought to light some of the tensions discussed above. It is from this starting point that stakeholders could work towards co-constructing new shared realities.

### 5.2 Using key concepts from GST (von Bertalanffy, 1968)

Midgley (2007) notes that his use of a three wave metaphor to describe the evolution of system thinking may mask the fact that some researchers have continued to usefully develop older systems ideas. Although The Open Systems Group (1981) seem to view

systems as tangible entities, describing them as a structured set of objects and/or attributes which have a relationship between them; systems can also be considered as analogies to enable the analysis of problem situations and the generation of new understanding (Midgley, 2007).Dowling (1994) applies concepts from GST in this way to understand educational problems with schools, children and families. As does, Bowen (2007) who uses GST to distinguish between high and low performing schools and explore their interactions with the wider community.

Bowen (2007) uses concepts from GST to support the thinking of American school social workers. However, it is argued that his thinking can be usefully applied to EPs working in schools because there appears to be some similarities between the role of American school social workers and EPs. For example, Bowen (2007) writes that American school social workers carry out work which is largely based in schools and involves supporting the school but at the same time advocating for children and families. Bowen (2007, p.73) discusses the usefulness of applying GST to school based work, writing that 'general systems theory provides school social workers with a broad lens through which to view schools as organised, complex and dynamic entities.' He adds that GST helps;

> to understand that schools are social systems with complex properties and subsystems (parts of the larger whole) and suprasystems (environmental contexts). (Bowen, 2007, p. 62)

The biologist von Bertalanffy was the founder of GST (Checkland, 1981). von Bertalanffy (1968) proposed that there are laws and principles that can be applied to systems irrespective of their particular kind. However, he also highlighted the distinction between closed and open systems describing physical and mechanical systems as closed systems

that have a closed relationship with their environment and biological and social systems are open systems that are in constant interaction with their environment. Open systems are made up of organised elements and notes that the way in which elements are organised is important because it is this which gives rise to the properties of the system (Midgley, 2007).

Hoy and Miskel (1989) also describe schools as open systems which interact with their environments. Bowen (2007, p.62) agrees that school systems are open systems. He writes that;

> With permeable boundaries, schools function in dynamic equilibrium with their environment; that is, they both have internal and external inputs and outputs. Open systems tend to maintain themselves in steady states through feedback processes (positive and negative feedback loops) that operate through the dynamic interplay of subsystems and suprasystems.

Ayers et al. (2000) write that von Bertalanffy (1968) would consider a school as being a system interconnected with other systems where changes in one system, for example a family system would impact on the school system and vice versa. They also note that changes in parts of one system (sub-system) will affect other parts of the system. Dowling (1994) indicates that key concepts of GST such as circular causality, punctuation, homeostasis and information feedback can be used to understand casework with schools and families. Visser (2004) writes that using systems approaches helped to establish understanding of the various processes involved in facilitating change and the importance of feedback loops (see section 5.2.4). It is these key concepts of GST which will now be applied in the context of this casework to assess whether they may have usefully informed the TEP's practice.

### 5.2.1 Circular causality

Dowling (1994) explains that the principle of circular causality views behaviours in terms of cycles of interaction with behaviours affecting and being affected by others. In terms of epistemology Dowling (1994) writes that linear cause-effect models and the need to gain knowledge through 'why?' questions is replaced with 'how?' questions. Therefore, attention is given to sequences of interaction and patterns which surround events. A simple example in terms of this casework may be applying the concept of circular causality to support stakeholders' thinking about behaviour patterns. For example, instead of teachers wanting to know 'why' X was behaving in a certain way questions may revolve around 'how' their own behaviours affected X's behaviour and vice versa.

The TEP raised 'how?' questions with various stakeholders such as X's mother, class teacher and teaching assistant while she was gaining information about X's behaviour at home and school. Questions which emerged from guiding hypotheses included exploration of how X began her work in class, how she communicated with others in her sub-system and the wider system and how they in turn communicated with her, how X accessed lessons and how lessons were planned to cater for her individual needs, how X was treated at home by her parents and how this differed from her treatment at school.

In the casework the TEP shared her understanding of sequences of observed interactions with X's class teachers, the SENCo and X's mother. She discussed for example, how X's behaviour could be affected by sequences of interaction at school, for example X not being spoken to or questioned at school and so not being provided with opportunities to speak

and this potentially reinforcing learned behaviour patterns about not speaking at school, which in turn caused X to appear withdrawn and passive. Other sequences of interaction such as school staff feeling the need to protect X and so holding her hand and X then becoming dependent on adult attention and support and displaying this by not starting her work unless directed to do so by an adult or having an adult by her side were also discussed.

Although sequences of interaction were analysed by the TEP and shared during the course of the casework this was usually done on an individual basis with stakeholders. Moreover, as the TEP had conducted the behaviour observations analysis was from her perspective. It may have been more useful if stakeholders within the subsystem were supported in observing sequences of interaction so that they could gain understanding of X's behaviour and their own. Facilitating stakeholders to engage with the concept of circular causality may have led to a deeper understanding of behaviour patterns and explicit recognition of their beliefs about X and what information was shaping these beliefs.

Furthermore, the TEP's practice may have been improved by gathering stakeholders such as X's mother, class teachers, teaching assistant, SENCo and a member of the Senior Management Team together so that behaviour interactions could be explored collaboratively and a holistic picture built. Having stakeholders from a range of sub-systems present and following the systems analysis model (Jenkins, 1972, Gillham, 1978) could ensure that intervention objectives were collaboratively created and feasible in terms of fitting with objectives and pressures which existed in wider sub-systems.

### 5.2.2 Punctuation

Dowling (1994, p.5) describes punctuation as 'the point at which a sequence of events is interrupted to give it a certain meaning.' She writes that the concept of punctuation is linked with the concept of circular causality because

> If reality is viewed in terms of interactional cycles, it is easy to see how a certain interpretation of *what* causes *what* depends on the way reality is punctuated. (Dowling, 1994, p.5)

Dowling (1994) writes that punctuation can not be correct or incorrect as it reflects a view of an individual's reality. However, she states that in her opinion behaviour is closely dependent on the context it occurs in and advocates examination of the context.

The TEP used the punctuation concept while consulting with X's class teacher, for example, she would ask the class teacher for a description of a situation so that the teacher could share her understanding/reality of events. The TEP would then feedback her understanding of the teacher's reality to see whether she had interpreted it as the teacher had meant. In order to explore different realities the TEP would ask for the class teacher to explain the context in which the behaviour happened or ask for the teacher to continue the recount of events up until a different point and then punctuate the account and discuss what other perceptions could be held.

The use of punctuation may have been more effective if the technique had been used explicitly with stakeholders so that they understood what the TEP hoped to gain from using this approach. It may also have helped the casework if the systems analysis framework

(Jenkins, 1972, Gillham, 1978) was used. By following this framework joint meetings with a range of stakeholders would have been arranged. The TEP could have used these meetings as opportunities to analyse and reflect back to stakeholders when reality was being punctuated. Statements made during the meetings which were pertinent to understanding X could have been punctuated by the TEP. This would have facilitated analysis of the perceptions of different stakeholders. It is possible that this approach of sharing realities with key stakeholders in the system may have lead to a change of perceptions, for example if X's mother or the TEP had shared accounts of X's abilities to speak at home and engage in activities independently.

### 5.2.3 Homeostasis and entropy

The Open Systems Group (1981, p.18) define homeostasis as;

> the maintenance of a system in a relatively constant state in a changing environment.

Dowling (1994) writes that homeostasis is achieved through feedback from external environments. The feedback triggers system regulators which can change the system's internal condition and in this way maintain a steady state. Dowling (1994) and The Open Systems Group (1981) use the term steady state synonymously with the term equilibrium. Von Bertalanffy (1968) preferred to use the term equilibration in reference to systems. He notes that an exact balance of opposing forces is generally referred to as equilibrium but this is not a necessary condition for systems, rather a tendency to move towards a

balancing state is observed in all systems and he terms this equilibration. As ideas from Dowling (1994) will be discussed below the term equilibrium will be used.

Dowling (1994) writes that the concept of homeostasis can be useful in understanding how self-regulating properties of family and school systems may resist change in order to maintain a steady state. Gorell Barnes (1985) adds that the concept of homeostasis can be used to understand how changes in one family member may impact on other parts of the system which may lead to problems elsewhere in the family system which in effect keeps the family balance the same.

Dowling (1994, p.6) insightfully writes that;

> maintenance of disruptive behaviour in certain individuals contributes to maintaining the status quo of an institution which perhaps otherwise might be challenged.

She explains that as long as difficulties exist within an identifiable section of the system the rest of the system can be preserved and equilibrium is maintained. Moreover, she states that the behaviour of families and schools can result in maintaining equilibrium at the expense of particular children. In these instances Dowling (1994, p.7) writes that the question 'What in the school situation is helping to maintain the behaviour?' is useful.

In the context of this casework it could be argued that the class teachers felt the need to maintain a constant state within their classroom sub-system. During consultation with the TEP the class teachers indicated that they felt that X's needs were too extreme for the school (wider system) and their class (sub-system), and they felt unable to devote time to implementing an intervention for X. One class teacher stated that she felt that X's presence

was affecting her ability to meet the needs of the rest of her class. It seemed that the class teacher's ideal was to maintain her classroom equilibrium by having X's needs met at a special school provision. However, as this had not been achieved as part of the Annual Review process the class teacher may have consciously or subconsciously positioned X as separate from the rest of the sub-system (her class) to enable her to continue with her familiar teaching practices and attitudes towards teaching, and in this way maintain equilibrium.

Sharing the concept of homeostasis with stakeholders could be challenging as this would involve exploring what the teacher viewed as a steady state for her and how, if at all, she thought X prevented her achieving this. However, had the TEP had knowledge of the concept this may have guided her own understanding of barriers impacting on the casework. Through using a systems analysis framework opportunities to pose relevant questions through structured meetings may have been possible. It seems that the casework may have achieved better outcomes had the TEP established with stakeholders what they felt was a state of equilibrium within the sub-systems and the overall system. Once this was established discussions surrounding meeting X's needs and maintaining equilibrium could be facilitated.

Kast and Rosenzweig (1981, p.48) write that entropy is a term which describes the 'tendency for any closed system to move towards a chaotic or random state in which there is no further potential for energy transformation or work.' They go onto explain that;

> the only way in which an organisation can offset entropy is by continually importing energy, and information in one form and another, transforming them, and redistributing resources to the environment.' (Kast and Rosenzweig 1981, p.50)

Kast and Rosenzweig (1981) explain that because open systems, such as school systems, have a dynamic relationship with the environment they are able to receive inputs and transform these in some way. This allows open systems to offset entropy. Kast and Rosenzweig (1981) note that open system processes can allow negative entropy to take place which is when an entity becomes more organised and efficient.

The TEP could have used the concept of negative entropy more explicitly by feeding back to stakeholders how her input in the system could support the school to become more organised and efficient in meeting X's needs. For example, following the systems analysis framework (Jenkins, 1972 and Gillham, 1978) would have allowed opportunities for the TEP to share her knowledge of systems theory, selective mutism, evidence based educational interventions, child development and special educational needs with stakeholders. The TEP could have suggested her input as one way, alongside the ideas of other stakeholders, to support negative entropy in X's sub-system, perhaps impacting on wider systems at the same time.

### 5.2.4 Information sharing and feedback

Kast and Rosenzweig (1981) explain that the concept of feedback is important in understanding how a system maintains equilibrium because it is the feedback process which allows a system to receive information and adjust to it. They write that feedback can

be positive and negative and explain that negative feedback is informational input which indicates that the system is moving away from a steady state and adjustments need to be made. Within the concept of feedback Kast and Rosenzweig (1981) write that management is important in interpreting and adjusting to feedback.

Midgley (2007, p. 11) writes that those using systems approaches to guide thinking consider things holistically. However, he notes that 'it is impossible for human thought to be all encompassing.' This point may illustrate the importance of using collaborative approaches in order to attempt to gain a more holistic representation of reality. Dowling (1994) believes that information exchange is important in understanding families and schools. She notes the importance of collaborative approaches and discusses how using a feedback model to share information can modify the perceptions of those in the feedback loop. It is argued that the TEP could have sought to establish more inclusive feedback loops which may have enabled a wider range of feedback to be shared with members from various sub-systems. This in itself may have helped to change perceptions of X

During the course of the casework the TEP had been a part of various feedback loops. For example, she had consulted with X's mother, X, X's class teachers and X's teaching assistant. In these situations she was able to listen to feedback from these stakeholders and determine how X's behaviours were affecting the equilibrium of sub-systems such as X's home and classroom. During these consultations the TEP gained negative feedback from stakeholders in that they were expressing concern that the equilibrium was not stable because of difficulties they were experiencing in managing X's needs. She used the feedback gained from these small loops to inform her intervention planning. Upon

reflection, the TEP could have managed this feedback more successfully to inform collaborative intervention planning and implementation, perhaps by taking guidance from Visser (2004).

Visser (2004) set up multiple feedback loops between all groups involved in the system to facilitate information flow which was essential to intervention implementation and was necessary to ensure that the intervention fitted with the context in which it was being introduced. In retrospect the TEP could have facilitated a larger feedback loop which incorporated sub-system stakeholders, for example X's class teachers, the teaching assistant X's parents and members of the Senior Management Team.

The impact of antagonistic relationships between teachers and parents as a barrier to home school co-operation is discussed by Miller (2003). Dowling (1994) explains that families and schools are linked over a considerable amount of time and the feedback loop determines how systems are viewed by each other. Over time X's family system and the school system would have built up views of one another. Dowling (1994) explains that in the context of feedback exchange, although this occurs in a cyclical fashion, a particular point can be perceived as a 'cause' or 'effect' and this is determined at the point in which reality is punctuated.

From the TEP consulting with stakeholders on an individual basis the TEP was able to ascertain that X's mother felt that the school were contributing to X's difficulties and so were in part the 'cause' because they were not providing X with all the support that she needed and were very negative when discussing X's abilities. Terry (2002) notes that

overburdened and under appreciated school staff can often believe that children's problems stem from families being under involved in their children's education. Indeed, school staff had shared their opinion with the TEP that X was not being encouraged to complete homework or become more independent for example by carrying out daily tasks such as getting dressed independently. Therefore, conversely school staff held the opinion that X's parents were in part the 'cause' of X's difficulties.

It is not clear whether stakeholders from the school and family systems had been presented with opportunities to discuss their concerns and work towards joint objectives to support X's progress. This is a feedback loop, which the TEP could have facilitated, that may have considerably helped to improve casework outcomes. During a collaborative meeting the TEP may have been able to punctuate the feedback so it could be analysed in different ways. An important step in enabling the construction of an intervention which met the requirements of X while being realistic in terms of other demands placed on the school and family system would involve: stakeholders sharing their perceptions, co-constructing reality, and the TEP ensuring that consensus on the intervention format was gained from all stakeholders in the system.

## 6. Conclusion

A piece of longitudinal casework has been described where a TEP engaged in multiple activities (see Appendix 1) over several months, and so it can be argued that EPS delivery was time and cost intensive. In spite of this, from the TEP's perspective, casework outcomes were not altogether effective because X's progress was considered limited and

members of the school system did not learn skills which they could reapply to X's situation when difficulties re-emerged. It is possible to make any number of speculations about why the casework outcomes were not as effective as hoped. Perhaps the behavioural approach did not meet X's needs in the first place, or it was not implemented appropriately. Perhaps the measurements of progress were not precise enough, so actual progress made was not recognised. Upon reflection it seems that a salient barrier to the casework was that the intervention was not embedded within the school system. This seems to be because agreement from a range of stakeholders in various sub-systems was not gained.

Rathvon (2003) states that school interventions that tackle issues concerning attainment and social competence need respectful and collaborative implementation and monitoring because there is usually a degree of change needed in systems. From reflecting on this casework, although hypotheses leading towards the intervention had been confirmed by stakeholders the TEP's approach to the intervention had been too directive. She had for example, conducted an analysis of the problem situation and devised an intervention to meet X's needs largely on an independent basis. She had not worked collaboratively with other stakeholders in the system to ensure that the intervention met their needs and married well with other objectives that members of the system were working on.

This PPR has argued that a systems analysis framework (Jenkins, 1972, Gillham, 1978) could have been usefully applied to this casework in order to define the system under study, and wider system issues which may impact on the casework. It has been demonstrated that stages inherent in the systems analysis model may have supported collaborative working with a range of stakeholders in the system to ensure that intervention

objectives had the consensus of stakeholders and met the needs of the system. One caveat to the systems analysis approach was that it may not take account of power hierarchies which exist within systems (Midgley, 2007).

Although, Midgley (2007) writes that the conceptualisation of overarching systems and sub-systems mentioned within GST (von Bertalanffy, 1968) can be criticised for being over simplistic, this PPR has demonstrated that concepts from GST (von Bertalanffy, 1968) such as viewing the school as an open system to aid understanding of how different parts of the system impact on one another can be usefully applied to the casework. Ideas surrounding circular causality, punctuation, homeostasis and information feedback can also be usefully applied to analyse the interactions and beliefs between individuals in various sub-systems, and to facilitate the sharing of perspectives.

Checkland (1981) writes that progress within the systems movement will come from the use of systems ideas in specific contexts and Covington (1998) explains that concepts from systems theory may be a useful framework to employ in complex settings where there exist unpredictable variables which impact on one another. A school setting is certainly complex and this PPR has demonstrated that there exist numerous variables which impact on one another. Although, this PPR has demonstrated that systems approaches can, in theory, be usefully applied to educational psychology casework in schools, one threat to establishing a collaborative approach is that it relies on bringing different stakeholders in the system together. In a time pressurised environment, such as a school, this may be challenging. It seems that further exploration of using systems approaches within the constraints of a school system is well deserved.

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## Appendix 1: An overview of the Trainee Educational Psychologist's actions

| Month | Action |
|---|---|
| **Oct** | • Observation of X in class and feedback to SENCo<br>• Email to supervisor regarding potential for X to stay in school<br>• Feedback to class teacher and negotiated ways to meet X's needs in school environment<br>• Observation of X at home<br>• Playground observation and work with TA to devise intervention to increase X's independence, motivation and encourage her to complete learning tasks independently |
| **Nov** | • Telephone conversation with X's mother<br>• School visit to offer support to TA and discuss intervention progress |
| **Dec** | • Telephone conversation with X's mother to gain her perceptions and feedback progress at school |
| **Jan** | • Telephone conversation with X's mother to gain her perceptions and feedback progress at school<br>• School visit to work with TA and set up a Precision Teaching programme (to target learning rate)<br>• Review meeting to discuss the progress X had made |
| **Mar** | • Review meeting with SENCO, class teacher and TA<br>• Letter written to the Acting Head teacher requesting support for X in the morning |
| **Apr** | • Observation and assessment of X in school |
| **May** | • Attendance at the Annual Review |
| **Dec** | • Consultation with SENCo where concerns were raised about X's rate of progress |
| **Jan** | • Consultation with the school concerning their difficulties with X<br>• Telephone conversation with X's mother |
| **Feb** | • Observation of X in school and consultation with TA |

# CHAPTER SIX

# SUPPORTING CAPACITY BUILDING WITHIN AN EDUCATIONAL PSYCHOLOGY SERVICE THROUGH THE EXAMINATION OF LITERATURE RELEVANT TO READING AND DIRECT INSTRUCTION

## ABSTRACT

This Professional Practice Report (PPR)) recognises, through provision of a descriptive vignette of a Trainee Educational Psychologist's delivery of Direct Instruction training in a school, the role educational psychologists (EPs) have in identifying, constructing and delivering evidence based educational interventions in order to support capacity building in schools. Taking guidance from Solity et al (2000), this PPR argues that in order to promote reading interventions EPs must have up to date theoretical, psychological and pragmatic knowledge which can support them in devising and delivering evidence based training programmes to schools, and importantly maintaining integrity as evidence based applied psychologists. A review of contemporary literature is provided with the aim being to enhance extant information in the Educational Psychology Service (EPS) Direct Instruction (DI) training manual for teaching basic reading skills (Raybould et al. 2006).

The PPR concludes that generic DI principles can offer an effective teaching approach to school staff. However, it is suggested that EPs offering DI training in schools and to EP colleagues supplement the information available in the EPS DI manual (Raybould et al. 2006) with theoretical perspectives on teaching reading, an overview of the psychology which underpins the DI approach, an overview of extant DI research, and an account of the benefits and limitations of the approach. Furthermore, in order to extend the evidence base for using generic DI principles, it is suggested that EPs gather outcome data on how the DI approach has been embedded in school contexts and with what results. This will involve ensuring intervention evaluation is built into training delivery.

# SUPPORTING CAPACITY BUILDING WITHIN AN EDUCATIONAL PSYCHOLOGY SERVICE THROUGH THE EXAMINATION OF LITERATURE RELEVANT TO READING AND DIRECT INSTRUCTION

## 1. Introduction

Cameron (2006) recognises that Educational Psychologists (EPs) carry out a plethora of activities which include supporting schools by delivering training on effective evidence based interventions and strategies. Ten years ago Miller and Leyden (1999) recognised that there was a drive for EPs to become involved with training teachers and more recently Balchin et al. (2006) write that staff training is used by EPs to promote systemic change in schools. However, Solity et al. (2000) criticise the way in which some educational research is introduced to schools. They argue that previous research is rarely built upon, preventing a coherent body of knowledge being developed. They criticise the fact that some interventions are not underpinned by theory or a strong evidence base, are not easily generalisable to real life classroom settings, do not marry well with local authority policy, and do not identify effective teaching strategies which effect significant changes in pupils' learning.

The author of this Professional Practice Report (PPR) is employed by a local authority Educational Psychology Service (EPS) as a Trainee Educational Psychologist (TEP). The EPS the TEP is employed by favours building capacity in schools, and one suggested way is through EPs offering training and supporting school staff to develop their skills. Taking

guidance from Solity et al (2000), this PPR argues that in order to promote reading interventions EPs must firstly have up to date theoretical, psychological and pragmatic knowledge which can support them in devising and delivering evidence based training programmes to schools and importantly maintaining integrity as evidence based applied psychologists. Furthermore, it is argued that EPs should recognise the benefits and limitations of an approach before introducing it to school settings.

Direct Instruction (DI) is a teaching approach, which has been suggested as a very effective method for improving reading skills (Carnine et al. 2004) and is promoted in the EPS where the TEP works. This PPR aims to offer useful and contemporary information to enhance extant EPS training materials in the EPS 'Direct Instruction (DI) training manual for teaching basic reading skills' (Raybould et al. 2006). The PPR will firstly provide background information on frameworks guiding the teaching of Literacy in England and examine pedagogy to teaching reading. A descriptive vignette of the TEP's delivery of DI training in a school setting will add to the rationale for an in-depth examination of the DI approach.

## 2. Background information: frameworks guiding the teaching of Literacy in England

Fisher et al. (2000) explain that soon after the new Labour party were elected to government in 1997 they introduced the National Literacy Strategy (NLS) (DfEE, 1998) in a bid to raise literacy standards. Although the NLS (DfEE, 1998) was not statutory Fisher et al. (2000) write that the majority of English primary schools adopted the strategy and

from 1998 until 2006 the NLS (DfEE, 1998) was used in many schools as a guide to teaching literacy skills such as reading and writing. The NLS (DfEE, 1998) provides teaching objectives at text, sentence and word levels for each year of primary education. It is recommended that objectives are delivered through a daily 'literacy hour' which incorporates phonics work, shared reading or writing, independent or guided work and an end of lesson plenary. Fisher et al. (2000) explains that before the NLS (DfEE, 1998) was introduced to schools literacy teaching varied considerably but often was more individualised. After instructions to the whole class the children would complete individual work and the teacher would move around the class monitoring and supporting as necessary (Fisher et al. 2000). Individual reading and the use of worksheets to support the teaching of phonics were also promoted (Fisher et al. 2000).

Torgerson et al. (2006) explain that phonics teaching refers to approaches that emphasise the relationship between letters and sounds. They point out that phonics approaches are a much debated area of literacy teaching. The NLS (DfEE, 1998) recommends a mixed approach to teaching Literacy that includes an element of phonics instruction. However, Torgerson et al. (2006) explain that it is argued that phonics teaching approaches should be the predominant method of word identification. As well as debates about how much teaching should draw upon a phonics approach. Torgerson et al. (2006) also point out debates about how to teach phonic skills.

There are numerous different approaches to teaching phonics and Carnine et al (2004) discuss: synthetic phonics, analytic phonics, analogy-based phonics, phonics through spelling, embedding phonics and onset-rime phonics. Torgerson et al. (2006) explain that

two primary methods of teaching phonics are referred to as the synthetic phonics approach which involves sounding out and blending sounds in words and the analytic phonics approach, which avoids sounding-out and focuses on analysing sound-symbol relationships from sets of words which share a letter and sound. Following the analytic phonics approach children would identify the common phoneme in a set of words discuss how the words are alike or dissimilar and deduce the word from that (Torgerson et al. 2006). Carnine et al. (2004) explain that children following this approach rely on previously learnt words to support them with the process of learning new words.

Lingard (2000) criticises the ability of the NLS (DfEE, 1998) to meet the needs of lower attainers. He raises concerns that some children who had not mastered basic literacy skills could easily be left behind by the end of Key Stage 1 because teachers followed National Curriculum (QCA, 1988) and NLS (DfEE,1998) guidance which did not meet their needs in terms of offering opportunities to return to learning and reinforcing basic literacy skills. He expresses surprise that the NLS (DfEE, 1998) did not incorporate elements which he found to be effective in his Literacy Acceleration programme (Lingard, 1997a, 1997b). Amongst the six key elements inherent in Lingard's (1997a, 1997b) programme is the statement that systematic phonological and spelling teaching should be provided to low level literacy attainers several times a week, and students should read to an adult every day.

Lingard (2000) describes the Literacy Acceleration programme. He explains that it involves groups of children being taught outside of the main literacy lesson and incorporates features such as them reading independently for 20 minutes, and individually to an adult each day. Other features of the programme include the teaching of initial sounds and letter blends by a teaching assistant to an individual pupil for 10-15 minutes four or five times per week, a spelling session and the requisite that a piece of writing be produced in English lessons every week or at least once a fortnight. Parents are encouraged to listen to their children read each day and records are taken in a reading record book.

Lingard (1997a) describes the progress of two groups of year 7 pupils (26 in total) with literacy difficulties who were taught in Literacy Acceleration groups for 50 minute sessions nine times a week. The rest of their time was spent in classes with peers. In terms of staffing three special needs teachers worked closely together sharing the teaching of the groups, 2 teaching assistants were also present, four Year 12 pupils acted as student volunteers whereby 2 students would support the younger pupils with their reading for 2 lessons a week. Although significant literacy gains were reported (see Lingard, 1997a) it is evident that Lingard's Literacy Acceleration programme (Lingard, 1997a) could be criticised for being cost and time intensive.

Recently teaching guidance for primary schools in England has changed. Since 2006 schools in England have been introduced to the Primary Framework (DfES, 2006a) to guide literacy teaching. This Framework has superseded the National Literacy Strategy (DfES, 1998). The Primary Framework (DfES, 2006a) takes account of research developments since the NLS (DfEE, 1998) and recommendations from the 'Independent

review of the teaching of early reading' (DfES 2006b). This review emphasises the role of systematic phonic instruction and promotes the provision of high quality phonics teaching in literacy lessons.

The Department for Education and Skills also commissioned the Universities of York and Sheffield to conduct a systematic review of experimental research on the use of phonics instruction in the teaching of reading and spelling (see Torgerson et al. 2006). Torgerson et al. (2006, p.8) found that systematic phonics instruction, that is, 'the teaching of letter-sound relationships in an explicit, organised and sequenced fashion' within a broad literacy curriculum was found to have a statistically significant positive effect on reading accuracy and this effect was seen across all ability levels. Interestingly, this review found no evidence for the superiority of either synthetic or analytic phonics instruction when compared with each other. However, the authors recognise that there were only three small RCTs on which to base this comparison.

Torgerson et al. (2006) conclude that systematic phonics instruction within a broad literacy curriculum appears to have a greater effect on children's progress in reading than whole language or whole word approaches but there is still uncertainty as to which phonics approach (synthetic or analytic) is most effective. The study concludes that every literacy teacher should know how to deliver systematic phonics instruction and it should form a routine part of literacy teaching. The review recognises that systematic phonics should be used with children achieving educational milestones and those at risk of failure.

## 3. The rationale for examining the DI approach

During her 3rd year of doctoral training the author was approached by two Special Educational Needs Co-ordinators (SENCos) who were interested in receiving support and raising attainment in reading for primary children with Special Educational Needs (SEN). More specifically, the SENCos wanted teaching assistants to receive training on an appropriate reading intervention. One school approached the author for further information on an intervention called Corrective Reading (McGraw-Hill Companies, 2009). The Department for Children, Schools and Families (DCSF, 2007) recognise that Corrective Reading (McGraw-Hill Companies, 2009) is a useful programme for teaching reading skills. The Corrective Reading programme provides sequenced and scripted lessons, and is targeted at pupils reading one year or more below their chronological age (McGraw-Hill Companies, 2009). Harris et al. (2000) explain that Corrective Reading is based on DI principles and can be used to assist pupils with decoding and comprehension difficulties.

Although, the EPS where the TEP worked did not promote specific commercially available teaching programmes the Direct Instruction approach to teaching reading was promoted. The EPS had created a DI training manual (Raybould et al. 2006) which drew on DI approaches discussed by Carnine et al. (2004). Carnine et al. (2004) explain that their DI approach primarily uses synthetic phonics for the beginning reading stages. Therefore, as one SENCo was already interested in using a programme underpinned by the DI approach the TEP suggested that generic DI training might be beneficial for the teaching assistants, and both school SENCos agreed.

## 4. What is DI?

DI programmes can be used to teach phonic skills, reading comprehension skills, mathematics and various other skills (Carnine et al. 2004). Carnine et al. (2004) recognise that DI has been defined and explained in different ways. Binder and Watkins (1990, p.80) explain that DI is an 'educational philosophy and a set of teaching procedures and programming principles derived from that philosophy'. They note that one of the principles of DI is that disadvantaged children can 'catch up' to their peers if they receive efficient and effective teaching. They recognise that effective programmes which result in children gaining basic skills at the same rate as their peers will still result in them being behind, if they start from a lower vantage point. Therefore, these children need a programme such as DI which will teach more in less time and close the gap between them and their peers. The DI philosophy assumes that pupils fail to learn because teaching instruction is not efficient. In this way the responsibility of student's learning is placed with programme developers and teachers using the approach, and not the young people.

According to Grossen (1995) DI was initially used to teach young children at risk of not achieving educational goals, as part of Project Follow Through. Project Follow Through is considered to be the largest educational study in American history (Kinder et al. 2005). Grossen (1995) explains that Project Follow Through started in 1968 and comprised of an evaluation of 22 educational programmes in 51 American school districts which had a disproportionate number of children who came from low economic status families.

The main aim of Project Follow Through was to seek out the best pedagogical strategy to improve the academic performance of children attending the poorest schools in America (Grossen, 1995). The DI approach used in the programme evaluated by Project Follow Through was a set of teaching plans, designed by Siegfried Engelmann that made use of generic DI principles (Grossen, 1995). According to Kinder et al. (2005) and Grossen (1995) findings showed that the DI approach was effective for teaching reading, language and numeracy skills.

Even though there is a philosophical basis to DI approaches Carnine et al. (2004) explain that there are also universal programme features which have been identified through the synthesis of findings from experimental studies. The approaches were assessed and the effects on pupils were compared with pupils who had not received the DI approach. Effective teaching approaches were identified from the results of these experiments and include: teaching small components of information and offering pupils regular practice, guiding pupils during initial practice, ensuring pupils achieved a high level of success through careful planning of tasks (Carnine et al. 2004). Other important elements of the approach are the emphasis on small group teaching, and cognitive skills which are broken down into small units and taught explicitly. The DI approach does not assume that children will learn regardless of communication (Engelmann and Carnine, 1991) and so carefully scripted lessons are another feature of the DI approach (Carnine et al. 2004).

Rosenshine (1986) writes that DI systematically presents material in small steps and teachers pause to check for student understanding and elicit participation from all students. He outlines six important elements of the approach: daily review, presenting new material,

guided practice, corrections and feedback, independent practice and weekly and monthly reviews. Ganz and Flores (2009) identify the importance of using a teaching technique which makes use of modelling the required learning material and then requiring the material to be completed together and then testing the pupil, which involves the pupil completing the required task independently. They too recognise that correction procedures are an important element of DI and that the DI approach involves the teacher giving corrective feedback using the 'model correct response, lead and test procedure'.

Two major rules of DI are to teach more in less time so that pupils can reduce the gap in attainment between themselves and peers, and to control the details of what happens (Carnine et al. 2004). The goal of teaching more in less time is gained through the use of teaching procedures which maximise the amount of time pupils spend on learning and through the use of carefully developed materials that illustrate general cases (Binder and Watkins, 1990). The use of the general case strategy is explained by Binder and Watkins (1990) who state that the DI approach makes use of using the smallest number of examples to produce the largest amount of learning. Solity et al. (2000) describe distinctive instructional principles which they incorporated into their reading intervention. These elements are also derivatives of the DI approach, for example teaching children through distributed practice, teaching to high fluency levels and using interleaved learning.

There are features of the DI approach which distinguish it from other approaches and these are exemplified in Table 1.0 below and are discussed in the EPS DI training manual (Raybould et al. 2006).

| Feature | Descriptor |
|---|---|
| Scripted presentations | • Specify what the teacher says and does for each task<br>• Support quality control of instruction. |
| Small groups | • Typically taught with groups of 5 to 10 students. |
| Unison responding | • Generates high rates of responding by all students. |
| Signals | • Teachers ensure simultaneous responding by using pre taught signals |
| Pacing | • Allows the teacher to present more material during each instructional period, and maintains students' attention which may result in increased learning and fewer behaviour management problems. |
| Correction procedures | • Materials are programmed to minimize student errors.<br>• However, errors provide valuable information about the difficulties students are having, for example, that they need more practice applying certain skills.<br>• Teacher correction procedures allow additional teaching trials.<br>• Different types of errors call for different types of corrections. |

**Table 1.0 shows key features of Direct Instruction (Adapted from Binder and Watkins, 1990)**

Carnine et al. (2004) recognise that teachers must have specific skills in order to teach reading effectively. The teaching skills presented in Table 1.1 are needed for DI to be an effective teaching approach. As noted previously, the DI approach adopts the philosophy that the teacher ultimately takes on board the responsibility of the pupil's learning. If the teaching instruction is delivered in line with the DI guidance and the pupil does not learn it is the teacher's responsibility to adapt the programme of teaching so that the anticipated learning outcome is achieved.

| Skill | Descriptor |
|---|---|
| Knowledge and understanding | • Teachers understand the essential skills which are needed in the reading process and how to teach these skills |
| Teaching practice | • Teachers are able to effectively present lessons and include approaches which ensure that tasks are well paced and motivating. They are able to diagnose and correct errors that pupils make.<br>• Classrooms are organised so that time engaged in learning to read is maximised |
| Evaluation and assessment | • Teachers are able to evaluate the effectiveness of their teaching programme or strategies and select and modify approaches accordingly.<br>• Teachers are able to assess pupils so that they can be placed correctly in groups or programmes and their performance is monitored regularly<br>• Assessment inform teaching |

**Table 1.1 shows an outline of teacher skills needed to teach reading effectively (Adapted from Carnine et al. 2004)**

## 5. Delivering and reflecting on generic DI training and initial feedback

As noted previously, EPs from the TEP's local authority produced an in-house training manual to support the delivery and training of generic DI principles to schools (Raybould et al. 2006). The manual offers a large amount of pragmatic information concerning how to establish and maintain a group based DI programme for reading. The EPS DI manual (Raybould et al. 2006) was used as a springboard for the TEP and a colleague from the EPS to create 3 training sessions for two primary schools.

The aim of the training was to teach the delegates generic DI principles. The teaching assistants were initially trained to teach sight words using the DI approach. Once basic DI teaching skills had been established and were being used effectively to teach sight words the aim was to use the approach to teach phonics. To begin embedding the DI approach in the school settings three training sessions were delivered to school staff. Table 1.2 presents a simple overview of the content of the training sessions. The intention after the 3rd training session was for the TEP to raise the DI training as an agenda item during routine school visits and to offer consultation and review sessions with the SENCos and teaching assistants.

| Session | Participants | An Overview of Content |
|---|---|---|
| 1 | 2 SENCos from 2 primary schools | • To discuss training aims, how the approach would be implemented in school and with which pupils<br>• To share the background, evidence base and principles of Direct Instruction<br>• To demonstrate the key elements of a DI small group session |
| 2 | 2 SENCos and 11 teaching assistants from 2 primary schools | • To share the background, evidence base and principles of Direct Instruction<br>• To consider the wider applications of the approach<br>• To demonstrate the key elements of a DI small group session<br>• To give time to practice the approach<br>• To give time to address issues arising from today<br>• Homework: to practice skills with a small group of pupils |

| | | |
|---|---|---|
| 3 | 2 SENCos and 11 teaching assistants | • To collate questions arising from the previous session<br>• To explain how to:<br>– plan for progression<br>– know when to move on (mastery)<br>– review previously learned items<br>– keep records<br>– provide opportunities for further practice<br>• Share with colleagues ideas about how the DI can be useful in different contexts<br>• Answer questions |

**Table 1.2 presents a simple overview of the DI training content**

After the 3rd training session evaluation sheets were handed out to participants who were asked to rate the training on a 5 point Likert scale with 1 being poor and 5 being excellent. Areas to rate were training content, training delivery and the training activities. Out of 13 distributed questionnaires nine were returned. This means that a maximum score of 45 could be achieved in any of the three areas. Table 1.3 presents participants' scoring of the training.

| **Area evaluated** | **Score**<br><br>**(maximum positive score = 45)** |
|---|---|
| Training content | 40 |
| Training delivery | 39 |
| Activities | 37 |

**Table 1.3 shows participants scoring of the DI training**

Also, as part of the training evaluation participants were also asked to list 3 things they had learnt from the training sessions and provided an opportunity to make any additional comments. Their responses are summarised in Table 1.4 below.

| **Participant's responses to a request to name 3 things they had learnt from the DI session** |
|---|
| • Purpose and effectiveness of DI |
| • How to deliver DI |
| • How to group children for DI |
| • The importance of using the technique correctly |
| • That trying to fit in DI little and often is so important |
| • How to introduce new words |
| • Pace/repetition |
| • Mastery/extension and interleaved learning |
| • How simple it is to do with a group of children |
| • Keep to the level of children's learning |
| • How to record progress |
| • How to work with children |
| • Direct Instruction can be applied to teaching everything |

**Table 1.4 shows comments from participants in response to an evaluation question asking them to list three things they had learnt from the DI training sessions**

### 5.1 Extending theoretical knowledge

The British Psychological Society (BPS, 2007) recognises that it is important to reflect on EP practice in order to ensure that it is continually being improved upon. During and after the DI training the TEP reflected on the training course. She noted that the evaluation responses received from the school staff were positive and delegates seemed to feel they had gained understanding of significant elements of the DI approach (see table 1.4). However, upon reflection the TEP considered that she would feel more confident delivering DI training and managing delegate's questions had she more in-depth knowledge of the theoretical underpinnings of the approach. She considered that although the EPS DI manual (Raybould et al. 2006) was useful in supporting the creation of the training sessions the information in the manual was largely pragmatic. In fact a review of the contents of the training manual showed that information about different pedagogical approaches to reading, an in-depth view of the psychology underpinning the DI approach and exploration of the evidence base for DI, particularly recent DI research was not included in the manual. Therefore, in order to extend and generate new knowledge to support EPS DI training the TEP sought to answer the following questions:

- What are contemporary theoretical perspectives on teaching reading?
- What psychology underpins the DI approach?
- What DI research is there and what does it report?
- What are the benefits and limitations for using a DI approach?

The TEP considered that this type of information would be particularly useful for TEPs, newly qualified EPs embarking on DI training who had not covered the approach as part of their training route, as well as for EPs and teaching colleagues

## 6. Contemporary theoretical perspectives on teaching reading

Carnine et al. (2004, p.2) recognise the importance of reading for academic, economic and emotional well being but proclaim that 'reading is a complex process- complex to learn and complex to teach.' They recognise that as well as the term reading being contentious the processes involved in learning to read are highly debated and 'psycholinguists, information systems analysts, reading researchers and cognitive psychologists each describe the reading process differently.'

Ehri et al. (2001) recognise that usually children start school with confidence and competence in using verbal language skills but often have very little knowledge of reading. They explain that the term reading can be defined in different ways. They cite, for example, Harris and Hodges' (1995) Litearcy Dictionary as identifying 13 different definitions of reading and recognise that definitions of reading can be dependent on the theoretical and pragmatic assumptions which are guiding the definer. Ehri et al. (2001) recognise that the term reading can refer to understanding the meaning of text but argue that the meaning of reading is broader than this, and from their pragmatic stance it encompasses reading words in a range of settings and also the capacity to be able to read non-words (pseudowords) because this task assesses the ability to pronounce unknown written words. Ehri et al. (2001) assert that the teaching of reading should include helping

children to gain knowledge and understanding of the alphabetic system, teaching them to be able to decode new words, and helping children to build a growing bank of words which can be read from memory and recognised by sight.

Theoretical perspectives on teaching reading are discussed by Carnine et al. (2004), Ehri et al. (2001) and Solity et al. (2000). It should be noted that although Carnine et al. (2004) discuss these perspectives as separate entities this view is perhaps oversimplifying matters. The author argues that different theoretical perspectives can co-exist and be used together during a lesson or at different points within a lesson. Nevertheless, an overview of theoretical perspectives is useful in orienting the reader towards theoretical domains which influence the teaching of reading.

Carnine et al. (2004) explain that the pessimist viewpoint promotes the assumptions that schools can do little to improve reading performance unless the pupil's inherent abilities, home or social environment are changed. Proponents of this view look outside of school systems for solutions to improve pupil performance (Carnine et al. 2004). Carnine et al (2004) argue that over 40 years of research has shown that if pupils are taught using explicit evidence based strategies they will learn to read and improvements in the rate of learning will be seen.

The generalists view is that reading can be improved if schools focus on developing a wide range of skills which underpin reading. Advocates of this approach may focus on skills to enhance motivation or general skills needed for learning such as listening and attending skills. A criticism of this approach is that pupils spend less time receiving teaching for

reading skills. Attention is also drawn away from ensuring good quality teaching of reading (Carnine et al. 2004). Modality matching and learning styles approaches also stem from the generalists perspective of reading. These approaches can classify learners as auditory or visual and then assign methods of teaching according to this classification (Carnine et al. 2004). Carnine et al. (2004) criticise the modality and learning styles approach because of the lack of evidence to support the effectiveness of these approaches. They argue that all pupils, regardless of attributed learning styles will benefit from explicit and systematic teaching.

Other debates centre on whether teaching should begin with explicit instruction in symbol and sound correspondences where this is taught systematically with whole words, or whether initial instruction should be meaning-centred with correspondences taught incidentally in context as needed (Ehri et al. 2001). Ehri et al. (2001) explain that at present research indicates that approaches which systematically teach phonics are more effective than non-systematic approaches, and advocate that this type of instruction should be included in reading programmes.

However, whole language proponents believe that pupils' understanding and construction of meaning is central to the reading process and so there is not a promotion of phonics and decoding approaches (Carnine et al. 2004). Proponents of this view consider that reading is a skill which will develops naturally in environments which are supportive. Therefore, in order to improve reading performance constructivists would seek to enrich the learning environment and make it meaningful for the child. Liberman and Liberman (1990)

disagree that learning to read is a natural biological process. They argue that pupils need opportunities to practice understanding written representations of language.

Solity et al. (2000) explains that the developmental perspective advocates the teaching of skills which emerge first. Thus, the teaching of large units such as onsets and rimes should form the phonological unit which is taught first to children beginning to learn to read. Solity et al. (2000) contrast this view with instructional psychology where the teaching skill order is determined by what is seen to be most useful to the learner, irrespective of developmental patterns. Proponents of this view advocate teaching small units arguing that they are more generalisable and so support reading.

The instructional psychology approach discussed by Solity et al. (2000) mirrors the DI approach discussed by Carnine et al. (2004). Carnine et al. (2004) write that the DI approach is skills-orientated and so focuses on teaching specific skills and improving teaching methodology in order to affect increases in pupils' performances in reading. This approach, Carnine et al. (2004) argue, is the most effective approach to improving reading.

## 7. Psychological underpinnings of the DI approach

In order for EPs to promote an intervention they must have a good understanding of the psychology underpinning it. A review of literature indicates that DI approaches are underpinned by instructional psychology (Shapiro and Solity, 2008, Solity et al. 1999, 2000). Shapiro and Solity (2008) explain that instructional psychology draws on work from a number of different areas for example, rational analysis, direct instruction, and

behavioural psychology. DI is also influenced by learning theory (Carnine et al. 2004) and behavioural analysis (Ehri et al. 2001, Engelmann and Carnine, 1991, Binder and Watkins, 1990 and Rosenshine, 1986). Although Shapiro and Solity (2008) point out that these theories do differ in a number of ways they recognise that in terms of exploring how children learn they all pay an emphasis to the learning environment as opposed to children's individual differences.

Parsons and Polson (2000) explain that the nature versus nurture debate has been longstanding in the field of educational and developmental psychology. They explain that there is consensus that children interact with their environment however the debate centres on the extent to which the child's biological nature or the nurturing role of the environment contributes to a child's behaviour and learning. Parsons and Polson (2000) assert that DI interventions are grounded in the nurture side of the continuum and assert that the environment is the primary variable to facilitate learning. Although, the characteristics of the learner are recognised as important the main focus of analysis is placed on environmental factors such as the programme of teaching, the teaching script and group organisation rather than within child factors such as capacity and motivation to learn.

Salomon (1996) explains that instructional psychology is amongst the oldest fields of scientific psychology and Mckeachie (1974) writes that instructional psychology is concerned with subject matters relevant to educating, teaching and instructing. The instructional psychology approach, according to Solity et al. (2000), focuses on teaching the most useful and generalisable skills first. In terms of reading skills those following the instructional psychology paradigm would teach a relatively small number of highly useful phonological skills. Furthermore, taught skills should mirror tasks undertaken when

reading, writing or spelling (Solity et al. 2000). An emphasis is placed on phonological skills which are explicitly used in the process of reading or spelling. Solity et al. (2000) provide the example that when children read they synthesise phonemes into words and when they spell they segment words into phonemes. Therefore, it is these skills which might be thought of as directly related to reading and spelling.

Carnine et al. (2004) write that DI is influenced by learning theory and the teaching practices found in the DI approach are linked to this theory. They do not provide information about which specific learning theory they are making reference to but explain that the main influence from learning theory is that children generalise from their present understanding to facilitate new understanding when facing untaught examples. They explain that the DI approach pays attention to the sequencing of tasks and the way in which teachers guide children through the learning of tasks so that generalisation to unfamiliar areas is supported.

Engelmann and Carnine (1991) argue that a theory of instruction is based on scientific behavioural analysis and Ganz and Flores (2009), Ehri et al. (2001), Binder and Watkins (1990) and Rosenshine (1986) share this view. Behavioural analysis can be described as the examination of the relationship between an individual's behaviour (responses) and the environmental conditions that affect the behaviour (teaching). Engelmann and Carnine (1991) explain that in order to scientifically examine the relationship between the environment and the learner one of these variables must be held constant and the other should be varied. In terms of the DI approach the instruction is held constant. This means that teaching procedures are delivered in a systematic and routine way. This allows the teacher to learn about the learning behaviours of the pupil, measure and evaluate their

responses. In this way difficulties in acquiring the learning task and gaps in the pupil's learning can be identified.

Ehri et al. (2001) identify behavioural strategies such as cueing and reinforcement which are used as part of the DI approach. Ganz and Flores (2009) discuss how task analysis is used to devise programmes of work where skills are broken down into component parts and taught until mastery levels are achieved. Ganz and Flores (2009) also note that teacher behaviours, the learning environment and programme procedures including error correction are controlled to maximise efficient learning.

## 8. Exploring the evidence base of DI research

Snider and Schumitsch (2006) controversially state that teaching differs from other professions such as law or medicine because there is a lack of an agreed upon empirically-derived evidence base of practices and principles. They argue that in the absence of shared research knowledge, teachers often rely on attitudes and beliefs to guide their teaching practice which tends to be largely based on their own experience and cultural attitudes towards teaching. Snider and Schumitsch (2006) maintain that attitudes and beliefs should not act as a substitute for research-based practices that promote high achievement.

Therefore, with this controversial argument in mind it seems important that EPs explore existing evidence bases and seek to identify gaps in research knowledge and add to these so that a bank of effective practices and principles can be built on. Moreover, it seems important that evidence based research is shared with teachers so that they are empowered and can adapt their teaching to ensure that evidence based effective practice is

encompassed in their teaching style. However, it should be noted that all research evidence is context dependent and will have its own inherent limitations. This should be made clear when embarking on discussions with colleagues.

### 8.1 Three levels of DI research

Schug et al. (2001) explain that research and evaluation studies of the DI approach have been carried out in various settings over more than 25 years and that results from these studies show that DI has strong, positive effects on children's achievement in reading, as measured by tests of decoding skills, reading comprehension, and attitudes toward reading as well as a range of other educational skills. They cite Ellis and Fout (1997), who discuss three levels of DI research which exist in America.

Level I research is usually conducted in a highly controlled manner, in laboratory settings. Shrug et al. (2001) explain that this research is concerned with researching learning and contributes to constructing theories about learning. Shrug et al. (2001) explain that much level I DI research was conducted in the 1970s and 1980s and was concerned with identifying effective instructional practice. This included researching how to select and sequence teaching examples, how to use precise wording to communicate relationships and messages, how to provide corrective feedback, pace the lesson and achieve mastery and generalisation. Principles which were identified from these studies were used to create commercially available DI programmes and inform the underlying principles of DI, which have been discussed previously in this report.

Shrug et al. (2001) explain that level II and III research tests the DI programmes and practices which were derived from level I research. In terms of Level II research, Shrug et al. (2001) note that this consists mainly of small-scale pilot studies that test the effectiveness of particular programmes (e.g. the Reading Mastery programme, Corrective Reading or Language for Learning programmes) with particular student populations and is followed by school wide implementations. Level III research evaluates the school wide implementation.

Shrug et al. (2001) explains that each level of research has limitations, which affect the conclusions which can be drawn from the research. They summarise by stating that the internal validity is greater for the lower levels of research but the ability to generalise findings to other settings and so achieve external validity is greater for higher levels of research. They advocate researchers assimilating findings from different levels of research in order to determine the effectiveness of the DI approach.

### 8.2 Research which examines commercially available DI programmes

Siegfried Engelmann and colleagues used generic DI principles to build commercially available detailed teaching programmes (Carnine et al. 2004). Kinder et al. (2005) explain that in America prior to 2004, the No Child Left Behind (2001, cited in Kinder et al. 2005) legislation expected educators to demonstrate that all children can make progress, which led to an increased focus on the use of valid, scientifically based materials. In view of this Kinder et al. (2005) explain that districts reviewed the research base of published programmes to establish their effectiveness in meeting pupils' needs and raising

educational attainment. Kinder et al. (2005) and Carnine et al. (2004) claim that research supports commercial DI programmes more than any other educational intervention approach.

The most researched area of commercially available DI programmes is reading with numerous studies evaluating the effectiveness of programmes such as Distar Reading, Reading Mastery, and Corrective Reading (Kinder et al. 2005). Marchand-Martella et al. (2006) agree that DI programmes have shown to be effective in teaching pupils to read. They recognise that DISTAR Reading and Reading Mastery Classic have a strong research base to validate their effectiveness. Their study investigates the effectiveness of a Reading Mastery Plus programme to teach reading, using a three tier delivery system which offers increasingly more teaching support to pupils as required. They found statistically significant improvements in reading across grades using the programme.

Kinder et al (2005) review 37 studies spanning from the mid 1970's until 2005, which used DI commercially based programmes with children categorised as having high incidence special educational needs, including for example behaviour and learning difficulties. The studies compared the affects of DI against other teaching approaches. Eight studies spanning from the mid 1970's until 2004, with children identified as having low incidence special educational needs, including for example, children with diagnosis of Autism, moderate to severe learning difficulties and traumatic brain injury were also reviewed (Kinder et al. 2005).

The DI programmes included, for the studies with children with high incidence special educational needs, Distar (Reading, Language, and Arithmetic), Reading Mastery, Horizons, Corrective Reading, Language for Learning, Language for Writing, Reasoning and Writing, Spelling Mastery, Spelling Through Morphographs, and Connecting Math Concepts (see Kinder et al. 2005). The research designs for these studies were identified as experimental-pre-test-post test control group, quasi-experimental-non equivalent control group, pre-experimental one group pre-test-post test, quasi experimental static group comparison.

The DI programmes reviewed for the studies with children with low incidence special educational needs included Distar Reading, Language and Arithmetic, Corrective Reading, Reading Mastery and Corrective Mathematics. The research designs for these studies with children with low incidence special educational needs were identified as: pre-experimental-one shot case study which was longitudinal, pre-experimental-one group pre-test–post-test, single case-multiple baseline across behaviours, experimental-pretest–post-test, control group, and single case-multiple baseline.

Knder et al. (2005) report that of the high incidence studies, results showed that in only 3 out of the 37 studies with children with high incidence educational needs did children taught with other materials achieve better outcomes than the children taught using a DI programme. In regards to the low incidence studies, the authors comment that many of these students in the samples were identified as having low IQs in the range of 30-50. Nevertheless, the majority of the students learnt to read and master language. The authors

conclude that commercially available DI programmes have a strong research evidence base.

Commercial DI programmes have been used with children and adolescents with epilepsy and learning difficulties (Humphries et al. 2005). Humphries et al.'s (2005) research included 55 students with intractable epilepsy and learning difficulties, who were aged between 6.5 to 14.1 years with a mean IQ of 71.25 (SD = 13.56). The young people attended a hospital-based classroom with no more than eight students. They received DI teaching sessions for 3 to 4.5 days a week, typically for up to 16 weeks. All students received DI, with a focus on sight word recognition and word attack, reading comprehension, mathematics calculation and problem solving, oral language, and spelling. The instructional programs included: Reading Mastery, Corrective Reading, Horizons, Reasoning and Writing, Connecting Math Concepts, Language for Learning, and Spelling Mastery.

Humphries et al. (2005) conclude that despite severe learning difficulties, students with intractable epilepsy can make academic gains when taught by highly structured teaching methods such as DI. Pre-test–post-test academic gains were evaluated in comparison to normative test performance. At pre-test pupils achieved below test means in reading and mathematics, particularly in calculation. However, DI was associated with significant improvement in all academic areas except word identification in reading. This is interesting as DI has been shown to significantly improve word identification in other studies (Carnine et al. 2004). The study also found that the young people's IQ level was

related to certain academic gains, but gains were not associated with seizure variables or the number of days students spent in the programme.

Ganz and Flores (2009) explain that there is little research in the area of DI as a language intervention. They examined the effectiveness of a DI Language for Learning programme (Engelmann and Osborn 1999) which provides explicit teaching in language concepts, knowledge, and information needed for learning in typical classrooms. The focus of the study was on improving the children's oral language skills, in particular their ability to identify materials from which objects were made. Participants in the study were three children with Autism Spectrum Disorder (ASD) who were 10 and 11 years old. A single-subject changing criterion design was used. DI teaching took place during regularly scheduled sessions for approximately 20 minutes a day over approximately 3 months.

Ganz and Flores (2009) report that a functional relation between the DI programme and oral language skills was demonstrated by the student's skill increase over three criterion changes and across the three students. Although Ganz and Flores (2009) explain that the intervention was a success the amount of time it took for the children to learn a specific set of naming skills could be criticised for being too long. It should also be noted that the instructional procedures needed to be modified to meet the participant's individual needs. The researchers found that the young people required more concrete representations of objects than the presentation book alone. Therefore, actual items made from each material were used. However, Ganz and Flores (2009) conclude that their study provides initial evidence for DI's efficacy with regard to increasing language skills which may enable pupils with ASD greater access to the teaching curriculum. It could be argued that the fact

that the DI programme was modified poses as a threat in terms of evaluating the effectiveness of the programme and also questions the suitability of the programme for meeting the needs of the participants in the study.

### 8.3 Research which examines the use of generic DI principles

There seems to be less large scale research which investigates the use of generic DI principles when compared to the research which evaluates commercially available DI programmes. However, as with research which evaluates commercially available DI programmes research on the use of generic DI principles demonstrates that the DI approach can be effective in teaching different types of skills with children with various difficulties.

Parette and Blum (2009) provide guidelines on how generic DI approaches could be successfully used alongside multimedia Power Point software to teach word recognition skills to young children who may be at risk of developing difficulties with reading. Hayter et al. (2007) used a generic DI approach over four weeks to teach multiplication facts to two adolescents with learning difficulties who were 17 and 15 years old. Results showed that using the DI approach led to an increase in the number of correct responses and a decrease in the number of errors made.

Peterson et al. (2008) used generic DI approaches with a 13-year-old male with low functioning autism and echolalia. The purpose of the study was to determine the effectiveness of using visual prompts and the model, lead, and test DI technique to teach

the pupil how to appropriately respond to "Where are you?" questions, thereby increasing understanding about the environment and his place in it. Results from this study were positive with the young person showing a significant increase in understanding the target questions, when the DI approach was used.

More rigorous and large scale research which has been carried out in England and uses generic DI principles is discussed in Solity et al. (2000) and Shapiro and Solity (2008). They recount their Early Reading Research (ERR) which adopts a quasi-experimental research design. Solity et al. (2000) explains that the ERR project is concerned with investigating the most effective approaches to improving reading standards and preventing reading difficulties in children. The ERR project has devised a framework for teaching reading which aims to develop and teach phonological skills alongside other literacy skills by using specified teaching methods.

Shapiro and Solity (2008) discuss how their ERR approach draws on Carnine, Silbert, and Kameenui (1997), Carnine and Becker (1982) and Engelmann and Carnine's (1982) application of DI principles. Principles which underpin the DI approach such as distributed practice, interleaved learning and teaching to high fluency levels, are evident in their ERR (Solity et al. 2000 and Shapiro and Solity 2008). Salient aspects of the ERR project are children being taught on a whole-class basis, three times a day, for up to 12 minutes, with each session covering synthesis skills, segmentation skills, phonic skills and sight vocabulary for two minutes each. The remaining four minutes involved reading children high quality stories, which included elements of shared reading.

Solity et al. (2000) discuss a two-year experimental study where the progress of children following the ERR framework outlined above, during reception and Year 1, was compared to the progress of children taught to read through their usual classroom methods. Twelve schools were involved 6 of which followed the ERR framework and 6 schools which did not. Schools were matched on a range of variables including catchment area, size, free school meals, socio-economic status and importantly levels of attainment. In total the study involved 370 children (203 attending ERR schools and 167 attending comparison schools). The participants were assessed on a range of normative and criterion referenced assessments at the beginning of the term in which they began school and at the end of Year 1. They were also assessed on a series of early numeracy tasks to evaluate whether results may have been affected by the Hawthorn effect or teacher effectiveness.

Participants appear to have been well matched as Solity et al. (2000) write that no significant differences were observed between the ERR and comparison school children on any of the assessment measures when the children first started school. Results showed that by the end of Year 1 the ERR children were significantly outperforming the comparison school children on all measures of literacy with the exception of rhyming skills, which did not form part of the ERR intervention. The children in the ERR schools were found to be seven months ahead in reading. This represents a one month difference for every three months the children were in school. After two years, the ERR lower achievers were on average six months behind their chronological age. The children deemed to be lower achievers in the control schools were 16 months behind their chronological age.

Solity et al. (2000) discuss a limitation of their study is that it does not identify which features of the ERR framework contribute to reading gains and note that it could be argued that it was systematic teaching which caused reading gains rather than the specific ERR approach. In order to address this limitation their second study compares two systematic interventions: the ERR and the implementation of the National Literacy Project (NLP) which was the forerunner to the National Literacy Strategy (Solity et al. 2000).

Data was collected from 129 children (58 ERR and 71 NLP children) and over one year the progress of children within the ERR was compared to children included in the NLP. Solity et al. (2000) state that statistical analyses showed that children receiving ERR performed significantly better than the children in the NLP on seven out of eleven measures of literacy. The exceptions being scores on assessments of sight vocabulary, letter sounds, spelling, and rhyme. Although the scores of the children in the NLP were higher on these measures there was no statistically significant difference (Solity et al. 2000). Solity et al. (2000) also report that post intervention the ERR children had a mean reading age of 7 years 2 months which was ten months ahead of their chronological age while children in the NLP had a mean reading age of 6 years 8 months which was six months behind the ERR children. It would have been helpful if the authors included confidence bands for these scores so that the reader could critically assess this finding. Solity et al. (2000) conclude that the ERR framework, which draws on instructional psychology and DI teaching approaches, was more successful than conventional teaching approaches and the NLP.

Most recently, Shapiro and Solity's (2008) examined whether the ERR framework delivered in whole class, mixed-ability reading lessons could impact on children with poor phonological awareness and also benefit readers who were meeting age appropriate expectations. Shapiro and Solity (2008) do not refer to the Solity et al. (2000) and although the methods appear similar it is not clear whether the research was linked and involved some of the same participants. It seems the children in the experimental group received the same ERR teaching format which was described in Solity et al. (2000). The sample included teachers trained in the ERR approach delivering the ERR reading programme to whole classes of children from Reception to the end of Year 1. The total number of children involved in the ERR was 251. Children involved in the ERR received three short reading lessons per day, conducted entirely on a whole class basis. The comparison group comprised 213 children who received standard teaching methods. They were taught in 1 hour long lesson per day that included whole class, small group and individual work. During Reception, comparison children were taught the same letter–sound correspondences as ERR children.

Differences between the experimental and comparison groups were that in the comparison group teachers taught a slightly broader range of skills and were introduced to new sounds on a weekly basis. These sounds were presented in alphabetical order. Children involved in the ERR were introduced to new sounds which were determined by their frequency in written English. Moreover in the ERR project new sounds were only introduced once the majority of children were fluent in all previously taught sounds. The comparison children were taught to isolate individual sounds at the beginning, middle, and end of words. However, ERR children were only taught how to segment and synthesise entire words.

Assessments of children's literacy were taken at the beginning of the Reception year and at the end of each year until one year post-intervention. Results showed that ERR significantly impacted on reading performance for normally developing readers and those with poor phonological awareness. Shapiro and Solity (2008) report that the ERR approach reduced the incidence of reading difficulties from 20% in comparison schools to 5% in intervention schools. They conclude that phonological and phonics training is highly effective for children with poor phonological awareness, even when incorporated into whole-class teaching. They conclude that their results have implications for how to meet the needs of children who seen to be experiencing difficulties with learning to read as their results imply that the ERR whole class approach can successfully meet their needs within a whole class situation. This could suggest that the need for separate reading tuition outside of the classroom on an individual basis may not be needed. Shapiro and Solity (2008) identify the theoretical underpinnings of ERR, frequent and systematic teaching, teaching specific skills and in built differentiation as effective aspects of the ERR intervention.

### 8.4 Criticisms of extant DI research

Studies which have evaluated both commercially available DI programmes and generic DI principles can be criticised. In terms of studies evaluating generic DI principles, Peterson et al. 2008 and Hayter et al. 2007 do not make use of control groups which would help increase the validity of the findings. Their sample size is small and the studies were confined to one setting which also limits external validity, for example the ability for researchers to claim generalisations to other settings. Studies which have evaluated commercially available DI programmes (Marchand-Martella et al, 2006, Kinder et al. 2005) also do not use control groups. Solity et al. (2000) and Shapiro and Solity (2008) do

use control groups but recognise that they have not randomly allocated participants to groups which would have increased the external validity of their results.

A criticism of Kinder et al's (2005) paper is that although it offers a review of DI studies it does not include analysis of the limitations of the research designs. Flaws in research designs are important to clarify as these can impact on the ability to generalise and validate research claims. Kinder et al. (2005) do discuss each DI programme's results separately and this is important as it is difficult to compare DI programmes across studies because they differ in terms of programme objectives, and the target age for which the programme are suitable. DI programmes were also delivered with varying frequency and duration across different studies and this makes it challenging to compare results across studies.

Marchand-Martella et al. (2006) discuss the limitations of their research design. They recognise that they did not use a true experimental design and note that without a control group it was not possible to compare the gains made by the experimental group to students who received different reading instruction. They recommend that control groups are used to evaluate DI programmes so that causal relationships can be claimed. Another caveat to their study was that pupils in the study were also receiving another DI programme (Spelling Mastery), which teaches skills which may generalise to reading. They recommend that future research isolates DI teaching so that extraneous variables do not affect results and the programme under study can be more reliably examined. Marchand-Martella et al. (2006) also note that there study did not gather data on the ability of the young people to generalise skills to other settings, which could be further explored in future research.

A further caveat to the research presented in this review and indeed extant DI research is that a large amount has been carried out in America. It could be argued that findings are less applicable to schools in England because national frameworks and teaching pedagogy may differ considerably.

## 9. Benefits and limitations of using a DI approach

Research and literature have identified advantages and limitations of the DI approach. Kinder et al (2005) explain that a characteristic of DI research is the evidence of rapid learning for all abilities. They note that even children with severe learning difficulties can make rapid learning gains because of the systematic approach of DI. For example, Gersten et al. (1984, cited by Kinder et al. 2005) analysed data collected from the Direct Instruction Follow Through Project in terms of the variable of participants intellectual/ cognitive ability. They found that pupils with low IQs maintained consistent gains and gained the same amount per year as those with higher IQs.

Lingard (2000) explains that listening skills of lower attainers are poor in situations when they are not being addressed in a very small group or directly as individuals, with the DI approach great consideration is given to the environmental conditions impacting the learner, and strategies are in place to gain and maintain attention through for example choral responding and well paced lesson delivery. Adprima (2009) explain advantages of DI include lessons with very specific learning targets and rigorous assessment procedures to measure pupil gains. Schug et al. (2000) note that DI is cost effective and leads to a decrease in cost intensive remedial interventions.

Limitations of the approach are also discussed in the literature. Adprima (2009) and Rosenshine (1986) recognise that the DI approach may not be effective in teaching higher order thinking skills. Rosenshine (1986, p.60) explains that DI approaches have been shown to be particularly effective in the teaching of mathematical procedures and computations, reading decoding, explicit reading procedures such as distinguishing fact from opinion, science facts and concepts, social science facts and concepts, map skills, foreign language vocabulary, but suggests they are less relevant for teaching areas that are less well-structured, for example, composition, reading comprehension and analyzing literature.

Shrug et al. (2001) discuss that DI takes time to learn and teachers will fall at different points on the learning curve in terms of their training and experience which can impact on pupil gains. Adprima (2009) states disadvantages of DI are that the structured formats can stifle teacher creativity. In addition lessons need to be well prepared and organised and teachers must have good oral communication skills and be able to follow prescribed teaching orders.

Binder and Watkins (1990) discussed the fact that DI has been criticised because of the prescriptive teaching scripts which outline teacher's behaviour, the approach being artificial and teacher-directed. Binder and Watkins (1990) explain that critics argue that because of these factors learning is unlikely to be generalised at a conceptual level and the approach does not encourage problem solving skills. However, they dismiss these criticisms and argue that the design principles used by do facilitate problem-solving skills and generalisations. They describe how initially teachers require overt responding at each

step in the instructional sequence so that they can identify particular skills with which students have difficulty and apply appropriate reinforcement and correction procedures. However, as pupil's skill levels increase teachers may only require overt responding in some of the steps in a problem-solving sequence. They explain that this shift facilitates transition from teacher-directed to independent problem-solving. Binder and Watkins (1990) also recognise that distributed practice facilitates retention and the gradual shift from the teacher being the source of information to the pupil being the source encourages independent performance and the ability to generalise strategies and skills. Solity et al. (2000) and Shapiro and Solity's (2008) longitudinal research also suggests that generalisations are being made and maintained.

## 10. Conclusions

This PPR sought to extend theoretical, psychological and research information in the EPS DI manual (Raybould et al. 2006). It has been demonstrated that DI is underpinned by strong psychological theory and an educational philosophy which differs considerably from other perspectives such as constructivism. This PPR has also demonstrated that there is research which has explored both commercially available DI programmes and the use of generic DI teaching principles. Results from extant DI research are generally promising. However, in terms of exploring how generic DI principles have been used in school contexts the evidence base is arguably less strong in terms of the amount of research available and the quality of experimental designs. Research which uses generic DI principles, such as work by Shapiro and Solity (2008) and Solity et al. (2000) appears to be rigorously constructed and serves to illustrate that literacy interventions which are influenced by DI approaches can be embedded within schools with successful outcomes.

Solity et al. (2000) and Shapiro and Solity (2008) found that children's achievements in reading can be increased and difficulties prevented through appropriate instruction. It is the way in which children are taught to read which is identified by them as a significant variable in ensuring reading progress. This PPR concludes by suggesting that generic DI principles can offer an effective approach to teaching reading. It is suggested that EPs continue to offer training in DI to school staff and EP colleagues. Furthermore, it is suggested that information available in the EPS DI manual (Raybould et al. 2006) could be usefully supplemented with information described in this PPR so that delegates can be provided with a contemporary account of theoretical perspectives on teaching reading, an overview of the psychology which underpins the DI approach, extant DI research and be informed of the reported benefits and limitations of using the DI approach. In order to extend on the research evidence base for using generic DI principles it is further suggested that EPs gather outcome data on how the DI approach has been embedded in school contexts and with what results. In order to do this evaluation needs to be built into training delivery.

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