Introducing Facilitated Communication Training:
An Action Research Project

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INTRODUCING FACILITATED COMMUNICATION TRAINING – AN ACTION RESEARCH PROJECT

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ABSTRACT

Background: Facilitated Communication Training (FCT) is a controversial approach to supporting people with severe communication difficulties. It is one method of supporting Alternative and Augmentative Communication (AAC). It has the potential for enabling people with severe language impairments to access communication aids. The local education authority had experience of enabling a non-verbal young person with cerebral palsy who uses FCT to access mainstream education and were open to exploring whether other young people could benefit from this support.

Aims: To explore ways of introducing FCT within the local authority in order to enhance the communication of young people who had been identified as not having had access to the means of reaching their communication potential.

Method: An action research approach resulted in the implementation of a pilot project. AAC/FCT was introduced to a group of seven pupils and the adults who support them through a training and support programme. A case study methodology was used to analyse the outcomes for pupils and adults.

Results: Action research was found to support the introduction of FCT. Some pupils showed significant gains through access to AAC/FCT. The majority of adults reported changes in their knowledge, use and attitudes towards AAC/FCT. Many attributed this to an increased belief in pupils' potential.

Conclusions: Action research is an effective process in supporting change. There is a theoretical basis for explaining why FCT supports some pupils. The discourse used to describe FCT could be further supported by using theories that take account of context (mediated learning and activity theory) and could contribute to changing the negative historical and socio-cultural discourse associated with FCT. An effective training and ongoing support programme lead to changes in adults' practise.

LITERATURE REVIEW

A. Introduction

The literature on Facilitated Communication Training (FCT) has developed over the last 24 years. Early reports were largely based on personal accounts such as Rosemary Crossley and Anne McDonald's account of how physical support enabled Anne to communicate. The research literature grew considerably following the publication of Biklen's 1990 article in the Harvard Educational Review. From 1992 onwards many papers on FCT appeared in academic peer reviewed journals. These were mostly critical of FCT because the technique was not being 'proven' by the application of positivist experimental methodologies. Qualitative case studies were also being published by academics but these were highly criticised by the positivist researchers as not providing empirical evidence or a clear theoretical framework for FCT. In 1993 media coverage presented FCT as a hoax with the broadcast of "Prisoners of Silence" on 'Frontline' TV in the US.

Despite the increasing criticism from the academic world Crossley developed her work at the DEAL communication centre in Australia and Biklen continued to support and promote FCT at a practical and academic level through his work at Syracuse University in New York. In 1997 "Contested Words, Contested Science" was published by Biklen and Cardinal, which documented qualitative and quantitative evidence to support FCT and challenged positivist, experimental researchers to introduce protocols into their testing procedures that would enable FCT users to demonstrate authorship.

One of the most persuasive arguments in support of FCT is that some users have now become independent in their typing making it more difficult for sceptics to assert that the users are typing the facilitators words rather than their own. Users of FCT have also begun to have their accounts published in journals, books and newsletters. FCT users and facilitators have also presented at conferences and produced reports and videos.

It is the increasing number of personal accounts that are challenging professionals to question their assumptions about the competence of people with severe communication impairments and look again at how FCT is enabling some people to communicate in a way that they had not previously been able to at a level which had been assumed as being beyond their abilities.

This literature review will outline the development of FCT and consider the research evidence in relation to validity. Personal accounts by FCT users will be reviewed and the current theoretical basis for FCT discussed.

B. What is Facilitated Communication Training?

"Facilitated communication training (FCT) is a strategy for teaching individuals with severe communication impairments to use communication aids" (Crossley 1994: 3). It fits within the field of Alternative and Augmentative Communication (AAC), which aims to provide support to anyone who needs additional resources in being able to express themselves. Alternative communication refers to forms of communication that are used instead of speech, usually when a person does not speak or is unintelligible. Augmentative communication refers to forms of communication that augment, or add to speech. Alternative and augmentative communication involve the same communication aids and strategies.

There are a wide range of communication aids including objects, pictures, symbols, signs, letter boards, mini typewriters and portable computers which speak and allow internet access and environmental control. However, even the most sophisticated devices are operated in similar ways (e.g. pointing, eye gaze, switches) and require the user to produce a controlled movement frequently, consistently and on time. Even switches that detect the impulse to move a muscle, do not resolve interference from larger movements that cannot be controlled. FCT aims to provide the emotional and/or physical support to enable the person to use their communication aids.

Essentially FCT involves a facilitator using their hands to support the aid user to make choices and to communicate. They may support the aid user's hand, wrist, forearm, elbow, upper arm or shoulder to help them develop confidence and increased physical skills with the longer term aim of fading the amount of physical support and reducing dependency on the facilitator. It has been described as simply providing the physical and/or emotional support needed for a person to access their communication aid (Crossley and Stanton). "The ultimate goal is for students to be able to use the communication aids of their choice independently" (Crossley 1994: 3).

C. The Development of FCT

I. Rosemary Crossley and Anne McDonald

The story of FCT is generally thought to begin in 1977 when Rosemary Crossley used physical support to help a person with cerebral palsy to achieve greater control over their movements. Crossley was employed as a teacher at St. Nicholas hospital in Melbourne, Australia. The hospital was a residential establishment for children assessed as severely and profoundly retarded. The term we would use in Britain today to describe these children's impairments would be profound and multiple difficulties (PMLD). This is where Crossley met Anne McDonald.

"On the floor in front of me was the most extraordinary child. About the length of a four-year-old but skeletally thin, her body was in unceasing motion. The muscles and tendons on her arms and legs stood our like cords. As she lay on her side her legs were bent backward, her arms were pushed out behind her, her head was pushed back between her shoulders, and her tongue moved in an out continuously" (Crossley 1997: 1).

Anne was thirteen years of age and had lived at St. Nicholas hospital for more than nine years. She was diagnosed as having cerebral palsy and spent her waking hours lying on her side on the floor. Crossley initially taught Anne to communicate "yes" by clamping her tongue between her teeth and holding it back for "no". It was not until three years later that Crossley considered helping Anne extend her communication. Crossley was studying for a graduate teaching qualification and one of her literacy assignments was to try and develop a communication system for a hospital resident. "Obviously, I thought, nobody at St. Nicholas is going to learn to read or type, so I decided to try and teach a child to use Bliss symbols" (Crossley 1997: 5). A teacher in Canada had adapted the use of Bliss symbols to teach non-speaking children with cerebral palsy.

Crossley began by asking Anne to point to objects whilst lying on the floor, which she did "using her right hand, though slowly and with enormous effort" (Crossley 1997: 7). The next session Crossley tried to find a sitting position which enabled Anne to point:

"In order to enable her to point I had to bring her head forward and raise her right arm. Only when Anne's upper arm was supported above the table did

she have enough control over her forearm and hand to point clearly to widely spaced items. My role was to act as a responsive item of furniture, facilitating Anne's movement by moving when she moved, giving input to the extensor muscles of her arm when flexor spasm made her arm contract across her body, and constantly repositioning her hips and trunk to try and maintain her body and head in a straight line. Supporting Anne was neither easy nor comfortable, partly because she was so short that I had to stoop over, and partly because her muscle spasm was so strong that it took all my strength to inhibit it."

"What Anne and I were doing in 1977 later came to be called "facilitated communication." At the time, though, I was simply trying to adapt an ordinary non-speech communication method to a very particular set of disabilities. I didn't know whether this would work on Anne, and I certainly wasn't looking at it as something that could ever be applied to anyone else. It was (and is) simply a way to help improve someone's ability to point" (Crossley 1997: 8).

Anne could point to pictures and Bliss symbols within a restricted range of movement. Crossley admits her scepticism regarding Anne's abilities when she describes her reaction to being challenged by a friend to test whether Anne could recognise words. Her first reaction was to state that there would be no point: "I keep telling you she's *severely retarded*" (Crossley 1997: 10). However, when she did test her assumption that Anne would not be able to recognise words she discovered she was wrong. Not only could Anne recognise words she was soon able to point to words to make sentences which led Crossley to believe that Anne wasn't learning language as she went along, "she had language which was waiting on a means of expression" (Crossley 1997: 11). In order to give Anne the greatest means of expression possible Crossley began to teach her how to spell. "I would sit Anne at a table with a book propped up in front of her – the kind of book which has one or two sentences and a picture on each page. Every time I walked past I would turn the page and read the sentences on the new page. For good or bad Anne had nothing to do but study the page until I walked past next" (Crossley 1997: 12) Crossley also photocopied pages from books and stuck them to the bars of Anne's crib (the children were in their cribs from 4.30 in the afternoon to 7.30 in the morning). She taught Anne the alphabet using magnetic letters and the Sesame Street alphabet song.

As Anne developed her communication skills the first of many debates that continue to surround FCT began. The doctors who had labelled Anne profoundly retarded declared that she could not be spelling and refused to observe her. Psychologists tested Anne three months after she had made her first sentences with word blocks and declared that she was indeed reading and spelling (they presented Anne with typed text they had written themselves and was unseen by Crossley, they then asked Anne to answer three comprehension questions which she answered with Crossley's physical support). The hospital paediatrician carried out an assessment using the Denver Developmental Scale and declared that Anne had the potential of a twelve-month-old. Despite the disbelief and lack of support for change in the hospital Crossley continued to provide Anne with reading materials and opportunities to communicate. She also began teaching 11 other children with cerebral palsy to read and spell.

It wasn't until Anne declared that she wanted to leave the hospital that the debate about her abilities became a matter for the courts to decide. In order to leave the hospital Anne had to file an application for a writ of habeas corpus in the Supreme Court of Victoria. Basically anyone viewed as restraining a person's liberty has to produce legal justification for the imprisonment or let the person go. In May 1979 Anne's application for habeas corpus was heard in court. Now came the questions: Could Anne communicate? If so, had she communicated a wish to leave the hospital? Crossley reports that the official position was that Anne was severely retarded and could not communicate. The positive psychologist's report had been removed from her file. Anne writes:

"I couldn't feed myself when I was sixteen, and thus it was clear I must have no more IQ than a child who couldn't feed itself. This was validated by weighing me. As I was the weight of a one-year-old this must be my mental age. This would all be very humorous if the measurers had not believed their results and used them as evidence for why I should be locked up" (Crossley 1997: 21)

The judge accepted that size was not the issue, the supportive psychologist's report was revealed, a court psychologist observed Anne achieve "a score in the average range, answering sixty-eight questions correctly out of seventy five attempted" (Crossley and McDonald 1980: 238) on the Peabody Picture Vocabulary Test and Anne proved her competence by typing

words in court which had been mentioned to her and not to Crossley. The Supreme Court of Victoria recognised that Anne's facilitated communication was her own. Anne left the hospital in May 1979 and began her fight for the rights of people without speech.

One might assume that the controversy over FCT and Anne's abilities would have stopped there but this was only the beginning. There were after all another 11 young people who Crossley had been training in the hospital. A report by a government Committee of Inquiry (1980) stated that Crossley's training of the children had been inappropriate and harmful and she was stopped from having any further contact with them. "Immediately after the report's release I was removed from St. Nicholas and Anne was banned from visiting everyone she had lived with for fourteen years" (Crossley 1997: 23). This report was finally discredited when it was found that the Committee had concealed positive test results. Annie's Coming Out (Crossley and McDonald) was published in 1980 and added to the concerns about conditions at St. Nicholas hospital to the extent that the government announced in 1981 that the hospital would be closed.

Anne's story illustrates how an innovative, sceptical teacher tested her assumptions ingrained by society and the labels given to people who do not speak. In the process she found a way of enabling people without speech who had neuromotor difficulties to communicate with physical support and in so doing challenged the assumptions held by herself, medics, academics and society. To deny the effectiveness of FCT would necessitate the denial of Anne's capabilities **or** to see it as a 'one off' unique case study that cannot be replicated.

II. The DEAL Communication Centre

While Crossley was still teaching at St. Nicholas Hospital a group formed to support her and the children she was teaching. "We hoped to provide them with a new deal, so we called the group DEAL and decided it stood for Dignity, Education, Advocacy, and Language, all the things the children needed" (Crossley 1997: 62). In 1986 the DEAL Communication Centre was opened as Australia's first centre devoted to developing communication for people without speech.

Crossley has documented many case studies in her book "Speechless – facilitating communication for people without voices" (Crossley 1997). She presents strong arguments about movement differences and difficulties, which inhibit communication; the importance of training facilitators; the nature of communication and the redundancy of IQ testing. Not surprisingly, such strong views and challenges to long held beliefs about disability and testing fuelled the controversy surrounding FCT. The central question of authorship (Are disabled people really the authors of what is being typed with facilitation?) has dominated the controversy.

The first published investigation occurred at the DEAL Communication Centre when the Australian Victorian Community Services Minister initiated a review in response to criticism from an Interdisciplinary Working Party (1988) who according to Biklen (1993) was an "ad hoc group of psychologists, speech specialists, educators and administrators" (Biklen 1993: 11). The Working Party was critical of the practice and reported outcomes at the DEAL Communication Centre, particularly in relation to Crossley's work with children and adults with autism.

A government inquiry entitled "Investigation into the Reliability and Validity of the Assisted Communication Technique" was carried out by the Intellectual Disability Review Panel (1989). This quantitative experimental study involved two different procedures. The first required the communicator to answer questions that were the same or different to their facilitator. The second required the communicator to tell their facilitator what gift they had been given by the experimenters. The results are summarised as follows:

"The validity of the communication while using the 'assisted communication technique' was demonstrated in four of the six clients who participated in the two studies. Under controlled conditions the data clearly indicated that the communication of one of the three clients was validated using the 'assisted communication technique'. The communication of the three clients who participated in the message passing exercise was also validated. The validity of the remaining two clients' communication when using the 'assisted communication technique' was not established. However, the absence of data on these occasions does not automatically imply that the clients are not capable of communication. In all three cases of the controlled study, client responses

were influenced by the assistant. Influence occurred with a client who demonstrated valid, uninfluenced responses to other items. It appeared that a given assistant could influence some client responses and leave others uninfluenced" (Intellectual Disability Review Panel 1989 p 40).

The review panel concluded that the study provided support both for those who support assisted communication and those who doubted it. The DEAL Communication Centre was able to continue to provide support and extend their work to include a wider client group of children and adults with autism. It was through Crossley's work with people on the autistic spectrum that Doug Biklen became involved in facilitated communication.

III. The Introduction of FC[1] to the United States

Douglas Biklen, a professor at Syracuse University in New York and an advocate of inclusion for disabled people received a letter from Australia claiming that Crossley was eliciting "high-level" communication from students with autism. He states quite clearly that he was sceptical about such a claim:

"I did not know what to think about this claim. It seemed conceivable to me that Crossley and her colleagues had happened on a *few* people with autism for whom such communication was possible. But it made no sense that people with autism who had been classified as severely intellectually disabled would have normal or even near-normal literacy skills. By definition, people with autism who do not speak or speak only a small range of phrases are referred to as "low-functioning" and are thought to have severe intellectual disability as well (Rutter 1978) ... The letter about Crossley was baffling, so much so, that, whether consciously or not, I put it out of my mind for a year and a half" (Biklen 1993: 2).

Biklen did however visit the DEAL Communication Centre where he met Jonothan and David, two students with autism who were using FCT to communicate. It is quite clear from Biklen's account of this visit that his assumptions about the abilities of people with autism were significantly challenged by what he witnessed. Biklen notes: "Jonothan and David produced

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[1] Differences in the use of FC (facilitated communication) as opposed to FCT (facilitated communication training) began when Biklen referred to the approach as FC, which has become the popular term in America. This study has intentionally used FCT to refer to this teaching strategy as the methods used have been directly based on those developed by Rosemary Crossley

only a few sentences in the several hours that we were together. But when they typed, they did so fairly quickly, without hesitation, and independently (with just the hand on the shoulder)" (Biklen 1993: 1).

In order to develop a better understanding of how facilitated communication worked Biklen returned to Deal in 1989 and conducted a qualitative study involving 21 students and their supporters. He used observations and interviews to gather data, which he coded to identify categories and generate themes and hypotheses.

In terms of authorship Biklen noted numerous instances of independent communication: "A dozen students were observed typing phrases independently. Six of them communicated independently (without hand support on the arm or hand) much of the time, with at least two different facilitators. Of those who typed independently less often or not at all, nearly all had only recently been introduced to facilitated communication" (Biklen 1993: 27).

Observations of people who Crossley was seeing for the first time "startled" Biklen. For example, Louis, a 24 year old who had very little facial expression and spoke in phrases that did not make sense demonstrated his linguistic ability by typing "IM NOT RETARDED ... MY MOTHER FEELS IM STUPID BECAUSE IH (he backspaced this and crossed out the H) CANT USE MY VOICE PROPERLY ... HOW MUCH IS A CANNON?" (Biklen 1993: 9).

The themes identified by Biklen included the following:

- Communication is not always easily facilitated
- Students often had difficulty communicating with more than one or two facilitators
- Students may refuse to communicate at particular moments, in particular situations, with certain people or at specific times
- Some students are independent in some situations but dependent in others
- Some students produce obviously incorrect information
- Facilitators often find themselves inadvertently cuing students to letters, words and statements
- Communication varies between individuals despite having the same facilitator
- Facilitators assume competence in the communicator

Biklen's reports that his observations "forced" him to redefine autism. He could not ignore the demonstration of unexpected literacy skills by autistic students previously described as severely intellectually disabled. Upon his return to the United State he wrote up his study of students at DEAL, which was published in the Harvard Education Review in 1990. He also began his own training programme on facilitated communication at Syracuse University. This was when FC became popular in the United States and the scientific debate began in earnest. As Crossley describes "Biklen's article spurred the establishment of facilitated communication programs across the United States and Canada. While Biklen covered the down side of facilitation and said it was a technique to be used with care, these caveats were generally overlooked in the enthusiasm to release those imprisoned in silence. Thousands of individuals labelled autistic or intellectually impaired were soon using communication aids with facilitation" (Crossley 1997: 251).

The problem with this upsurge in FC in the United States was that many people began introducing it without training and support providing a wealth of opportunities to discredit the strategy. As Mayer Shevin says: "It is very easy to facilitate very badly" (Shevin 2003 personal communication at TASH conference).

D. Quantitative Studies Against the Validity of FCT

Seven months after Biklen's article was published in the Harvard Educational Review, criticisms of FC were reported in the press. One headline in an Australian newspaper read, "experts slam disabled 'charade'" (Heinrichs 1991). Cummins is quoted as saying: "It's time to call a halt to the charade … an apparent cult of deception or illusion" (Heinrichs 1991: 1). Cummins and Prior raised three concerns:

1. The facilitator is wittingly or unwittingly influencing the communication to the extent that it is the facilitator's words which are being communicated and not the communication users. They equated FC with the "Clever Hans Phenomenon" (Sebeok & Rosenthal 1981) in which a horse counted by responding to unconscious cues from its master.
2. FC has never been empirically tested and therefore has not been proven valid.

3. The claims about FC contradict 50 years of research into autism and developmental disabilities.

A spate of controlled studies in the positivist tradition began appearing in peer-reviewed journals in the United States from 1992 onwards. The first and perhaps most citied study was carried out at a New York mental retardation institution by Wheeler, Jacobson, Paglieri & Schwarz (1992, 1993). In this study 12 people labelled autistic, who had been using facilitation for five months or more were shown coloured pictures of familiar objects and asked to type the name of the objects under three conditions (unfacilitated, facilitator being shown the same picture, facilitator being shown a different picture). Unfacilitated responses were reported to be nonsense. When the facilitator was shown the same picture 14 out of 60 responses were correct. When the facilitator was shown different pictures 12 out of 60 responses correctly named the picture the facilitator had been shown but 0 out of 60 correctly named the picture the communication user had been shown. The overall performance was therefore poor and provided evidence of facilitator influence.

Several subsequent studies contributed to the bank of poor results using experimental procedures. For example, Klewe (1993) replicated the picture naming procedure of the Wheeler et al (1992, 1993) study and reported: "any appearance of communication during the experiments came from the facilitators rather than from the patients" (Klewe 1993: 565). Regal, Rooney & Wandas (1994) simplified the task by asking participants to point to shapes and numbers but all the responses were judged to be no better than chance.

Gina Green, Director of Research of the New England Centre for Autism is widely quoted as an authority on research into FC – her reviews of 12 studies published in 1992 and 25 studies published in 1994 have been widely used in the United States and Britain as evidence of the invalidity of FC. Green reports that out of a possible 146 opportunities for subjects to communicate via FC only three responses could be attributed to the subject and not the facilitator (Green 1992) and that out of 226 possible subject responses only 12 could be considered unexpected demonstrations of skill (Green 1994). She criticises the methodology used by qualitative researchers as being "strictly descriptive, not experimental and employed no objective measurement or procedures to minimise observer bias" (Green 1994b). She draws parallels between FC and

"ideomotor responses that direct dowsing sticks and Ouija Boards" (Green 1994b).

Hudson (1995) was very critical of Crossley's work in Australia. He cites early experimental studies, which collectively refute the claims made by FCT proponents. He was most critical of there being no theoretical base or coherent theory to support the use of FCT.

Jacobson, Mulick and Schwartz (1995) added to the negative academic reviews of studies stating: "Relevant controlled, peer-reviewed, published studies repeatedly show that, under circumstances when access to information by facilitators is systematically and tightly manipulated, the ability to produce communication through FC varies predictably and in a manner that demonstrates that the content of the communication is being determined by the facilitator" (Jacobson et al 1995: 6). They report that among 126 subjects there were only 4 possible instances of FC success. They argue that FC "is a pseudoscientific procedure serving antiscientific ends" (Jacobson et al 1995: 7).

Simpson and Myles (1995) expanded the review of studies started by Green in 1994. They reported that across 14 controlled studies involving 43 elicitation tasks, only 2 tasks showed any possible FC effects.

One of the latest reviews of published studies has been summarised by Mostert (2001) who states that his review findings support the conclusions of previous reviews (namely Jacobson et al 1995) and discounts the claims of two studies purporting to offer empirical evidence to support FC using control procedures. He reportedly reviewed studies that took place after 1995. In fact 16 studies he reviews were published in 1994 and 1995 and only 13 studies were published in 1996, 1997 or 1998. He was therefore not reporting on completely new studies and included studies that had appeared in other reviews. Is it therefore surprising that he draws similar conclusions? His bias towards quantitative experimental methodology is evident when he refers to including "methodologically unsound" studies "because a central issue in evaluating the efficacy of FC revolves around proponents' use of methodologically suspect means to claim FC as a successful intervention" (Mostert 2001: 290). He classified the studies into three groups:

1. 19 studies which provide one or more control procedures and which refute FC claims (53 outcomes refute FC and 2 are supportive)

2. 6 studies which provide one or more control procedures supporting FC claims (9 outcomes refuted FC and 8 supported)
3. 4 studies with no control procedures and supporting FC (0 outcomes refuting FC)

The types of control procedures used included:

- Facilitated and independent responses
- Naïve and informed facilitators
- Sighted and unsighted facilitators
- Inter-observer evaluation of subjects responses
- Verbal stimuli pre-recorded delivered simultaneously via headphones to subject and facilitator
- Random presentation of stimulus and distracter pictures to subjects and facilitators
- Visual and auditory labelling tasks
- Some tasks re-administered in reverse order to facilitator and subject and different degrees of facilitator support levels (none, medium, full).

Mostert summarises his review by stating: "generally it appears that there is a tendency for studies with several control procedures to refute FC claims, those with fewer control procedures to produce mixed results, and those with no control procedures to support FC claims" (Mostert 2001: 305). He then goes on to refute the claims of two studies with control procedures that were supportive of FC (Cardinal et al 1996; Weiss et al 1996) claiming that the "results are much more likely the artefact of methodological problems than an accurate representation of persuasive evidence" (Mostert 2001: 311). He concludes: "the results of the review support and confirm the conclusions reached by previous reviewers of the empirical FC literature" (Mostert 2001: 311).

So why is it that the results from the positivist researchers experiments are overwhelmingly negative. How can/should these results be explained or interpreted?

One factor to be considered is that different studies are reported differently depending on the author's viewpoint. For example, the IDRP (1989) study is reported by Jacobson et al (1995) to have found that two out of three subjects could not communicate with FC, this is only correct if reporting on half of the study. What the whole study actually found is summarised in this direct quote:

"the validity of the communication while using the 'assisted communication technique' was demonstrated in four of the six clients who participated in the two studies" (Intellectual Disability Review Panel 1989: 40).

Another factor to be considered is the quality of studies quoted by reviewers such as Green (1992, 1994), Jacobson, Mulick and Schwartz (1995) and Simpson and Myles (1995) and Mostert (2001). Some studies involved participants who only received training in FCT as part of the studies, in other words the participants and the facilitators were not practised users and facilitators (Eberlin, McConnachie, Ibel & Vope 1993, Smith, Haas & Becker 1994). For example, despite Mostert recording that the subjects and facilitators were experienced with FCT in the Smith et al (1994) study the FCT users (10 people aged from 14 to 51 with moderate to severe autism) were trained over two sessions prior to the experiment being conducted and the facilitators had no prior knowledge of FC. They concluded that the method "is actually a form of facilitator control rather than facilitated communication" (Smith et al 1994: 366). This raises questions about the validity of some of the controlled experimental studies. There appears to be an assumption that studies involving untrained participants and untrained facilitators are valid to the extent that recommendations can be made to stop the use of FC "for clinical and educational purposes" (Smith et al 1994: 366).

Bebko et al (2003) have also questioned Mostert's methods of reviewing the literature: "let us say from the outset, that we do not disagree with his overall conclusions that FC lacks empirical validation and should not be recommended ... we were dismayed to say the least to find Mostert had included our study in a category of studies described as supportive of FC! ... We question Mostert's understanding of our methods and results" (Bebko et al 2003: 219). They also question Mostert's grouping of studies according to results as opposed to types of control procedure and claim that his assertions become circular because of the manner in which he grouped the studies in the first place.

Another factor to be considered is that different studies ask different questions. They do not all address the question of whether disabled people can communicate their own thoughts via FCT. For example, Mostert includes a Japanese study by Kezuba (1997) designed to look at how facilitators control

subjects' movements. The participants were pairs of non-disabled friends, family and colleagues, with no previous experience of FCT, who were asked to facilitate each other using a contact rod in blind and non-blind conditions. They report that facilitators unconsciously applied sufficient force to move the subject's hand towards a correct response and therefore FC was invalid due to facilitator influence. This raises the question of whether it is valid to draw such conclusion from a study that used untrained facilitators and non-disabled adults?

However, despite concerns about the lack of experience of users and facilitators; selective reporting; the quality and rigour of some experimental studies and the differences in research questions, it is difficult to reconcile the very poor outcomes from studies that clearly did try to develop rigorous experimental procedures that were not threatening to the participants. The issues of failure to communicate, authorship and facilitator influence are clearly valid concerns that need to be addressed.

E. Quantitative Studies Supporting the Validity of FCT

Perhaps surprisingly given the negative results reviewed above, some experimental studies did produce results that supported FCT. So what did these studies incorporate that was different from other quantitative studies?

Mostert (2001) reports on only two studies, which used control procedures that produced mainly positive results (Cardinal et al 1996 and Weiss et al 1996), which he discredits on the grounds of poor methodology. However, there are aspects to these studies that deserve a fuller exploration.

Cardinal et al (1996, 1997) claim that previous studies had been too complex and "made it impossible to determine whether the study subjects had failed the test due to their inability to use facilitation or whether the testing procedure was invalid for the measurement of facilitation" (Cardinal et al 1997: 34). Interestingly they argue that if the results of a test of reading ability produce results that say that everyone who takes the test is illiterate then test is not validated. They strongly argue failure to achieve in a test situation as being due to two possible alternatives, which should have equal weight:

a. The phenomenon does not exist
b. The measure of the phenomenon is not valid or reliable

They address the fundamental research question: "Can facilitated communication users transmit rudimentary information to facilitators when that information is not known to the facilitator?" (Cardinal et al 1997: 35) Users and their familiar, trained facilitators were experienced in using FCT. Recorders randomly presented words (from a list of 100 words familiar to the users and facilitators) to the students. The facilitator was requested to enter the room and the recorders noted down the letters typed by the students as they were read aloud by the facilitators. Testing took place in 'closed' areas of familiar classrooms. The researchers were specific in their desire to provide a conducive environment, which in their view should be "naturally controlled". They also introduced a procedure that included opportunities for "extensive practice" (Cardinal et al 1997: 34). They report two main findings:

1. FC users can pass information to a facilitator when the facilitator is not privy to the information - statistically significant differences were found between un-facilitated trails and the students' best performances when facilitated with 75% performing better in facilitated conditions (Cardinal et al 1997: 47)
2. The ability of users to complete the task was increased by them practicing the test procedure (not the content). There was an increase in mean performance over time. Some users reached their best scores in the first 7 sessions (20) whilst others did not achieve their best score until the final 3 sessions (12). Not one of the 43 subjects passed the blind labelling test on the first trial (Cardinal et al 1997: 47).

The experimenters conclude: "one can easily see how possibly the 'one place in time tests' would show little or no success on validity tests. They also point out: "the 'one place in time' protocol is found in nearly all of the past quantitative facilitated communication experiments" (Cardinal et al 1997: 50).

Cardinal et al (1997) avoided the distracter condition used by many other experimenters where the facilitator and user are shown different stimuli and they also reduced what they refer to as 'over control' in other studies, where normally occurring environmental variables were controlled for when there was no reasonable rationale to do so (e.g. the controls referred to earlier such as FC users wearing earphones, use of screens, unknown settings/facilitators etc.).

They assert that such controls threaten to "breach the facilitator-user support mechanism" and hinder the ability of the FC user to communicate.

Cardinal et al (1996, 1997) are in agreement with the positivist researchers that "it must be empirically shown that FC users can perform better in a communication task using FC than they can using any other method". They suggest that "each facilitated communication user's communication must be continually but unobtrusively confirmed for authorship" (Cardinal et at 1997: 52) by becoming independent in their typing or by keeping a continuous record of authenticating events. Despite achieving some success with the controlled message-passing protocol the authors suggest that blind testing may not be the best way to test communication competence.

Mostert (2001) is very critical of this study stating that "several methodological problems within the study ... indicate that the conclusions drawn by the authors are, at best inconclusive" (Mostert 2001: 307). He is critical of the recorder because they recorded the letters the facilitator said the user pointed to without verifying this through direct observation. He argues that facilitator influence was not controlled for as the facilitator had open access to the word list used and would have been highly likely to guess the word once the first letter or two had been pointed to correctly. He also asserts that "a distinct practice effect existed" and that the FC user's increase in performance may have been due to some other educational intervention. Are these methodological issues significant enough to assert that the outcomes of the study are inconclusive? Given the fact that the FC user's performance varied considerably between trials (e.g. a student may gain 5 correct responses on one trial followed by no correct responses and then by 5 correct with the same facilitator) it could be argued that if the facilitator was able to significantly influence the responses of the student then there would have been a much more consistent pattern over the trials and much better results.

The Weiss, Wagner and Bauman (1996) study has been reprinted in Contested Words Contested Science (Biklen and Cardinal 1997) along with another case study (Weiss and Wagner 1997). Their original 1996 paper reported on an experiment conducted with a 13-year-old boy (Kenny) diagnosed as having autism, severe mental retardation and seizure disorder. Basically, a short story was read to Kenny by the experimenter who then asked

Kenny questions about the story. Kenny answered with facilitation from the experimenter. He then answered slightly different questions with facilitation from an uninformed, experienced facilitator. Three trials were conducted using a different story each time. Kenny was highly accurate during the 1st and 3rd trial but not the 2nd. The researchers conclude that "the accuracy and consistently of these responses indicate that it is highly likely that Kenny, not the uninformed facilitator, was the source of answers about the stories" (Weis et al, 1997: 146). Mostert's response to this study is that experimenter and facilitator influence as well as instrument bias affected the outcome. It is not difficult to agree that Kenny's response to the experimenter asking and facilitating the typed answers could easily have been subject to influence, however this does not explain the correct responses with the naive facilitator. Mostert (2001) also claims that there is "a distinct possibility that the facilitator was not naive to the story trials 1 and 2 " (Mostert 2001: 310) because there was no referee present to verify that the facilitator was uninformed. Because the questions varied between the first and second time of asking he assets that there was a bias in the instruments used. Would he have argued practice bias if the same questions had been asked on both occasions? Again, it should be considered whether these methodological issues are sufficient to assert the outcomes of the study as being invalid.

Weiss and Wagner's scepticism of FC is worth noting as it provides the context for their studies. Weiss had been correctly reported as saying that FC "is a bloody hoax" in a national newspaper (Weis et al 1997: 136). However the persistent support for FC led them into studying it in more depth. They began with keeping logs of information passing between home and school. They gathered accounts from teachers and parents that supported the validity of FC and "implied that the children's abilities to communicate were far more sophisticated than any of us had previously believed, and seemed to indicate that a potentially great range of intellect was masked behind their disabilities. The summative effect was that we simply could *not* believe these accounts to be true: they were too discrepant from our prior beliefs and evidence of the children's abilities" (Weiss and Wagner 1997: 138). Consequently they went to "great lengths" to "explain away" these accounts but because the accounts were so specific and idiosyncratic it was very difficult to refute them. For

example they quote the words of Eddie, an eleven-year-old boy with labels of pervasive developmental disorder, severe mental retardation, no expressive language, a receptive vocabulary of approximately 20-25 words, and no prior indication of any ability to recognise letters:

> "Facilitator: Hi, Eddie, how are you today?
> Eddie: PRETTY GOOD, BUT/MY NOSE IS STUFFY, I TOLD YPOU (you) I WAAS (was) GETTTIN A COLD/I'M GLAD YOIU (you) ARE HERE/AND MOMMMY AND DADDY/WENT OUT/THEY DON'T HAVE ENUFF (ENOUGH) FUN
> Facilitator: I know, Eddie, I'm glad that they went out, too. Do you know who they went out with?
> Eddie: YES, VOVO FRANNNK (Frank), NANA CONNIE, UNCLE MANNY/AND/MARI MONESE (Moniz) I DON'T KNOW IF COUSIN MANNY WENT/WITH THEM BECUZ (because) THEY WERE/GOIN OUT FOR UN CLLE (uncle) MANNYS BIRTHDATY (birthday) I LIKE COUSIN MANNY. THEY DIONT (don't) THINK I KNOW, BUT HE RESSES UP LIKE SANTA EVERY YEAR AND COMES TO MYY (my) HOUESE (house). I KNOW IT IS HIM/AND I LVE HIM FOR DOIN IT THE REEL (real) SANSTA (Santa) IS TO BUSTY (busy) TO GO TO/EVERYBODYS HOUSE.

Eddie gave precise answers to questions about which the facilitator categorically claimed to have no prior knowledge. For example, the Portuguese word VOVO for "grandpa", family names, and information about a Christmas event (Weiss and Wagner 1997: 138). These sceptical researchers considered three possible explanations:

1. The facilitator was lying
2. Clever Hans phenomena was taking place (the facilitator was not conscious that they knew the information and were unconsciously cuing Eddie)
3. Eddie was the source of the information

They could not believe that the facilitator was lying and Clever Hans was very difficult to believe: "it was very difficult to imagine how the facilitator would have known obscure details about the family yet not be consciously aware of this knowledge" (Weiss and Wagner 1997: 139). This left them with the very

real possibility that Eddie could communicate unknown information through typing. It was due to the increasing number of "hard to explain" accounts and the willingness of students, facilitators and families to be involved in testing that they embarked on the study with Kenny. This context is helpful in allowing readers decide upon a particular researcher's motives and perspective, and whether they would falsify information.

Another quantitative study was conducted in Australia by the Steering Committee (1993), which was a division of the Intellectual Disability Services that had previously commissioned the Intellectual Disability Review Panel to verify FC at the DEAL centre in 1989. The Steering Committee study reported that 21 out of 24 participants gave information that the facilitator could not have known. The study was conducted over 12 months; it took place in naturalistic settings (i.e. teaching and conversational sessions as opposed to formal experimental situations); it included a range of possible response styles including message passing and multiple choice around naturally occurring events; participants were given ongoing feedback about their performance; participants were given multiple opportunities to pass the tests and they were asked supplementary questions and given lots of time to respond (Steering Committee 1993). This study was helpful in identifying difficulties with word finding which is one of the suggested reasons why some FCT users are not able to succeed in message passing or naming tests. For example, Biklen (1997) provides this extract from the report where Jane the facilitator is trying to help the FC user (client) to describe what she did for Judith the week before:

> "Jane (facilitator): Tell me what you showed Judith last week.
>
> Client: ON MONDAY I INSISTED JUDITH LET ME SHOW HER MY EASY
>
> Jane: Start again
>
> Client: TO SHOW HER HOW I MAKE SOUND IN MY LIVING ROOM
>
> Jane: mm.
>
> Client: I SANG IN THE LIVING ROOM IN MY FINGERS EVER SO EASY. DO IT TONIGHT IN THE LIVING
>
> Jane: Keep talking like this until you remember the word.
>
> Client: THE SOUND FROM MY FINGERS. TABLE BLACK BUTTONS ON IT (P) TIRED

Jane: Keep trying you're getting there
Client: STUMPS. PLAY MACHINE CALLED A REAL NICE YOU TELL
The facilitator had no prior knowledge of the fact that this person had played a piano and a pump organ for Judith. The client never did retrieve the words "piano" or "pump organ" though she described the activity: SOUND FROM MY FINGERS. TABLE BLACK BUTTONS. PLAY MACHINE"

(Steering Committee 1993: 31 reported in Biklen 1997: 26).

Other studies that used similar techniques also reported some success. For example Vazquez (1994) elicited 9 out of 10 correct object naming responses from one subject when this was presented as a game where her facilitator had to look away while she was shown the object. Ogletree et al (1993) reported that one young person could report on activities he had engaged in (12 of 17 responses correct) but could not name objects shown to him from behind a screen. Simon et al (1994) report that 4 out of 7 students were able to report on an activity they had taken part in and pass information that the facilitator could not have known about. Olney (1997) found that 5 out of 9 FC users achieved facilitation in blind (naive) facilitator conditions that were greater than chance but they needed multiple accommodations to do so including practice at test taking (none of the participants would have passed the test on the first blind trial); having a variety of tasks (computer software was used to present multiple choice, single letter or number and single word tasks) and practical and emotional support (in response to test anxiety, fatigue and fluctuating muscle tone).

In response to the mixed outcomes from quantitative studies Cardinal and Biklen (1997) have drawn up a set of protocol conditions that they "believe are essential to the valid and reliable authentication of authorship in controlled, quantitative facilitated communication studies" (Cardinal and Biklen 1997: 173):

- Extensive experience with using facilitation (more than 6 months)
- Practice using multiple methods (practice of test procedure not content over 7 or more sessions)
- Familiar facilitators (facilitated with users for at least several months prior to the study, using similar communication devices and tasks)

- Naturally controlled conditions (procedures and locations very similar to those found in the everyday environment)
- Extensive time to respond to questions (this may mean allowing 20-45 minutes in some instances)
- Monitoring for FC user's style (procedures should allow for FC to be consistent with what the user is experienced in)
- No risk or low risk testing (participants will not lose the right to communicate or respect of others if the test is failed)
- Minimise word retrieval tasks (e.g. use multiple choice and acceptance of description of objects function where the specific object name cannot be retrieved)
- Personally relevant content (e.g. interesting, important, motivating, meaningful to the participant)
- Age appropriate content
- Information provided by multiple modalities (visual, auditory, tactile etc.)
- Ongoing feedback on performance (feedback is given during the study to allow learning)
- Build confidence and limit opportunities to fail (use tasks the participant has demonstrated they can do, intersperse easy tasks with more difficult ones)
- FC user is consulted on test and format (which conditions may help or hinder their performance)

Cardinal and Biklen (1997) suggest that studies which include some of these conditions result in more authentic communication than studies that do not include them. They go further in developing a rating system to use when evaluating other studies, which has recently been used by graduates at Syracuse University. Not surprisingly they found that when studies of FCT were evaluated using this rating system a very different picture emerged. Most studies that claimed to refute FCT rated very low and they therefore question whether such studies should continue to be quoted as conclusive evidence when they did not make any allowances for the 'fragility' of FCT. (Marilyn Chadwick, Bolton Seminar June 2004 personal communication).

It could be argued that use of these protocols could invalidate rigorous experimental testing by biasing the procedures in favour of the FCT user. How

reasonable is it to introduce these protocols? If we consider that practicing for tests is a normal procedure in preparing students for standard assessment tests, GCSE's and any other type of routine testing then it does not appear unreasonable that students with significant difficulties should receive the same preparation. If we consider how the curriculum is routinely differentiated to enable pupils to demonstrate their ability through the presentation of materials that suit their learning styles then it does not appear unreasonable that students known to have word-finding difficulties should be presented with multiple choices options and access to computer software that may motivate and engage them. When these issues are considered in the context of what is normally available to students Biklen's suggested protocols do not appear unreasonable. These considerations do however highlight the potential that the testing procedures used by many experimental researchers do not make the normal, reasonable accommodations that are afforded to the general population.

Sue Rubin notes that because Cardinal and Biklen (1997) had highlighted the importance of multiple trials she took time to prepare for her SAT: "I spent the whole summer doing practice tests, so when I took the real SAT, I only had to think about the answers, not about taking the test" (Gillingham and McClennen: 141).

The traditional experimental methods of message passing and object naming may not be the most appropriate measures to test for authorship and facilitator influence. Andy Grayson, a senior lecturer in psychology at Nottingham Trent University has been studying FCT for several years. Grayson and his colleagues (Emerson et al 1998, Grant et al 2001 and Emerson et al, 2001) have developed a completely different methodology. Frame by frame video analysis of FCT users typing with experienced facilitators has produced quantitative evidence of authorship. A remote camera was used to track the eye movements of FCT users and found that looking and pointing were systematically related with 79% of the letters typed having been fixated on before they were pressed (Emerson et al 1998). Whereas it might be easy to see how a facilitator could influence the movement of a person's hand, it is difficult to see how they could influence a person's eye gaze before a movement has taken place.

A frame-by-frame analysis of FCT users typing with different facilitators was also conducted. The results indicate that each user has a distinctive movement style, which is consistent between different facilitators. The video evidence of the same FCT user moving in exactly the same way with different facilitators is compelling and supports Grayson's assertion that "there are striking movement similarities with different facilitators" (Grayson 2004 personal communication).

F. Qualitative Studies supporting the Validity of FCT

Biklen's (1990) conducted one of the early studies Crossley's work at the DEAL centre. He continued to study FCT using a range of approaches (Biklen 1993, 1997). In one study he used grounded theory to analyse data from classroom observations and interviews with teachers about how they confirmed authorship of 17 students who use FC. The central theme that emerged was that students differed from one another. These differences were grouped into four categories:

1. How they attend to typing – teachers saw the differences in the way students typed as evidence that it was the student doing the typing. For example, one teacher commented on how a student's eyes immediately went to the target letter she was going to type, even though it might take several seconds before the student moved her finger towards the letter. Another student was described as having a definite rhythm that other students did not have. One student was referred to as a 'pusher' because of his forceful typing another, as a 'minimalist' because of the light touch he used and the long pauses between letters. Also within this category was the degree to which students could type independently – some could type their names and the date independently but needed support for conversational typing. Some students could type structured work independently. Teachers viewed this as the ultimate in proving authorship.
2. The relationship of the students speaking to their typing. One student is described as using spoken words for labelling but not for conversation. For example, this student typed CAN I GO and then completed the statement by speaking out loud 'Castle Room'. When told that he could not, he tried to pull the teacher toward the door. Then he typed GO TO

CESTLE ROOM. The teacher saw the fact that his typing matched his speech, except for the spelling error, as evidence that the typing was his.

3. Communication form, content and style – teachers describe themes, spelling and other word-formation problems, and unusual expressions that they regard as distinctive of individual students and thus confirm the students as authors. For example, "Jacque often typed 'I no' and 'me no' rather than 'I don't' or 'me don't': I NO BE BAD I JUST HAVE HARD TIME WITH NEW PEOPLE and I NO LIKE IT WHEN OYU OR JANE BUTT IN and VERY SAD ME NO WANT TO BE FRIENDS WITH BOYS BOYS YUCKY"
4. Conveying accurate information not known to facilitators – teachers found this to be the most "compelling evidence of students' authorship". Thirteen of the seventeen students were reported to type information not previously known to their teachers, which was then verified. For example, "Stephen told his speech teacher that his father was getting remarried and the date on which it would occur. Both were accurate".
(Biklen et al 1997: 63)

A portfolio approach detailing this sort of cumulative data used by teachers to authenticate students' communication is suggested as the way forward (Biklen et al (1997).

G. Themes Emerging from Personal Accounts by FCT

From a research perspective these personal accounts do not appear to carry the same weight of credibility which articles in peer reviewed journals do and have therefore been dismissed by positivist researchers such as Mostert (2001). Crossley's work at the DEAL communication centre has resulted in her publishing further accounts of people using FCT to communicate in her book 'Speechless' (Crossley 1997). These accounts are reported in an anecdotal style and would therefore be unlikely to be accepted as 'research'.

A wide range of FCT users accounts have been published in 'Sharing Our Wisdom' (Gillingham and McClennen 2003), which documents the views of people with autism who use or used facilitated communication to find their voice. There are also books by people with autism such as Birger Sellin's 'I don't want to be inside me anymore" (1993/5) and 'The Mind Tree' by Tito Rajarshi Mukhopadhyay (2003). These publications together with conference

presentations and video productions are contributing to the understanding of FCT by those professionals willing to accept a broader range of evidence than that presented in academic research journals.

Of particular interest is the emergence of common experiences and views that have the potential to explain the 'how' of FCT and take us beyond the authorship debate. A review of facilitators' and users' accounts is presented below. They have been organised under themes that appear to be emerging from the literature.

I. Movement Difficulties

Crossley's account of Anne McDonald's development of communication through FCT is regarded as one of the first examples of facilitation. However other teachers had used similar approaches. For example, Oppenheim (1974) describes "hand-over-hand" work with autistic children to overcome problems with "motor expressive behaviour" so they could express themselves through handwriting:

"Many autistic youngsters have major problems in controlling pencils, chalk or crayons. This disability appears to be more pronounced in nonverbal children ... we usually teach writing by manipulating the child's hand, and thus feeding in the motor patterns ... So, in teaching writing, we find that it is usually necessary to continue to guide the child's hand for a considerable period of time. Gradually however, we are able to fade this to a mere touch of a finger on the child's writing hand. We're uncertain about precisely what purpose this finger-touching serves. What we do know is that the quality of the writing deteriorates appreciably without it, despite the fact that the finger in no way guiding the child's writing hand. 'I can't remember how to write the letters without you finger touching my skin' one nonverbal child responded. (Oppenheim 1974: 54)

Sue Rubin describes her early childhood as being a "very autistic child who was quite aggressive toward others – biting, pulling hair, throwing my head against someone's body etc. I was also self-abusive – head banging, throwing myself against walls, biting and quite ready to throw myself to the ground. I was so autistic that I was in a separate world" (Gillingham and McClennen: 134). This state continued until Sue was 13 years old when FC was suggested. Sue reports that the persistence of the professionals made her mother agree to an

assessment which took place at her house and she was "as amazed as they were when I could spell parts of words with someone pulling back on my wrist" (Gillingham and McClennen: 135). Sue has gone on to achieve academic success and can now type without physical supports but she "still needs a facilitator to keep her focused" (Gillingham and McClennen: 136). Sue Rubin shares her experiences in the film "Autism is a World" first shown on CNN in May 2005.

This idea of pulling back on a person's hand or wrist recurs frequently in the literature. Crossley (1997) talks about Marco who could type fluently if the facilitator was able to prevent him from repeating words and numbers due to perseveration (automatic repetition of a movement). Marcus recognised this himself when he typed "HOLD ME TO STOP ME DOING SILLY THINGS" (Crossley 1997: 119).

Tito Mukhopadhyay is described as having severe autism and being nearly non-verbal. He communicates through pointing to letters on a letter board and through handwriting. Lorna Wing writes the foreword of his book 'The Mind Tree'. She explains that Tito was taught intensively by his mother who "used the technique, familiar to parents and teachers of children with autism, of moving his limbs through the motions needed for each task, including pointing, until he learnt the feel of the muscle movements ... this seems to support the proponents of facilitated communication, who believe that all children with autistic disorders, however severely learning disabled they appear to be, are potentially capable of understanding and expressing complex ideas if helped by appropriate physical guidance" (Wing in Mukhopadhyay 2003: xi). Tito was independent in his writing by the age of 6 years.

Tito Mukhopadhyay (2003) writes about his difficulties in being able to make his body move in the way he wants it to. He describes how his mother taught him to write. She was insistent that he should point to answers using his alphabet board and then write the answer by copying the letters he had pointed to. "He was unable to copy and mother was throwing up a tantrum. She was not ready to give up. 'Let me hold your shoulder like I used to when you started pointing and communicating,' she said, trying to find a way. This time it was easy for the boy to write, as he could feel the presence of the hand, his own hand linked to his body, at the shoulder point, where his mother was holding

him. I have concrete proof that to start with any new activity, it is important for autistics like the boy, to be held at that part of the body, which does the work as the 'relating' ability develops slowly through practice. Then it can be faded out as the person gets the habit of that particular work. The boy could relate his thoughts to words and express them by pointing or writing only when somebody held his shoulder" (Mukhopadhyay 2003: 48).

Tito is very explicit about the difference between knowing what and how to do something. For example, he describes his mother trying to teach him to copy shapes such as circles and squares: "mother had to hold his hands and make him draw the figures, as the boy was slowly beginning to understand the 'how' to do it. I repeat 'how' to do it and not what to do. My readers must not have the impression that he did not know what to do, but it was 'how' to do" (Mukhopadhyay: 61).

II. Assumptions About Intelligence

Oppenheim advices educators to not let problems of general functioning, disordered speech, or even absence of speech serve as "an index of the likelihood" that a person might not be "able to absorb and benefit from teaching at higher cognitive levels"(Oppenheim 1974: 90).

Crossley (1997) challenges professionals to disassociate communication skills from intelligence. She states that "the continuum of intelligibility is just that – a person's place on the continuum says nothing about his or her understanding or academic abilities, but is purely a reflection of muscular control" (Crossley 1997: 96). She points out that Kanner's original description of children with autism was that they were intelligent but unable to demonstrate their abilities and it wasn't until IQ tests were introduced that autistic children with no speech were classified as low in intelligence.

Tito Mukhopadhyay repeatedly refers to those he met who were more interested in what he couldn't do than in what he could do: "People love to take special interest in the 'cannots' and not the 'cans' (Mukhopadhyay 2003: 27). He describes his first visit to a speech therapist that "was a bit impatient to handle a two years and eleven months old boy and declared after ten minutes observation that he was sorry to say that the boy was mentally retarded. I still go back to that moment and find that it was like lightening striking down on the family" (Mukhopadhyay 2003 :10). As he became more able to demonstrate his

intelligence he became aware of the scepticism in others and reacted accordingly: "The boy wondered about the different thoughts that people had and behaved accordingly. For them, who trusted him, he was eager to communicate, but for those who were sceptics, he refused to co-operate" (Mukhopadhyay 2003: 32).

Tito describes how he could not write any letter without a model (i.e. the presence of his alphabet board). "Suppose the letter was A, the picture of A did not form immediately in his mind. This does not mean he could not recognise A, from a jumbled group of alphabets … the boy was not learning the spelling, but learning to represent them on paper.

Tyler Fihe began using FCT at 6 years of age. He is very clear about the need to assume intelligence in people with autism: "I began communicating this way in first grade with my mother and with my school aide. This was very slow to be accepted by special education professionals, they just couldn't believe that someone like me could do this. I think this was one reason why it has taken me so long to learn how to type independently, because scepticism followed me year after year in elementary school, trying to wear down my spirit and stop my mother's ferocious determination. What no one realised was that the truth of my communication could not be stopped. We cannot stop because there is too much at stake. Wasted lives without a way to communicate must no longer exist" (Gillingham and McClennen: 115).

Sharisa Kochmeister explains her struggle to overcome labels of low intelligence and low potential: "When I decided that I was willing to work and fight my way out of my prison to freedom, I had to overcome evaluations that contained such pontifical statements as: 'No hope! uneductionable. No attention span. Her IQ is that of an infant. She should be institutionalised. She is and will *always* be incapable of communicating in any way.' For pity's sake, what did they expect from a non-verbal, extremely withdrawn and abused child when they only used such indecently idiotic methodology as verbal IQ tests and observation of behaviour in a self-contained special school? Just look around you anytime if you want to see people who would test poorly if all we chose to do was to observe their idiosyncratic, eccentric behaviours in environments that stifle individuality!!" (Gillingham and McClennen: 119 -120). She goes on to describe how, because she is unable to speak, she is forced to "*slowly* type" all

of her thoughts. She relies on her typing and her "enabler" to "communicate with and exist in a world where I once was and would otherwise still be a total stranger. It permits me to prove I am alive, smart, and able to think, understand, feel, hope, plan, hurt and dream just like the 'verbalizers of this world" (Gillingham and McClennen: 121).

III. Independence

Crossley (1997) acknowledges that some people will never be able to be independent in their typing due to the severity of their motor problems but she strongly argues that independence should be an expectation from the outset for most people. Crossley recognises that developing independence for people with autism can be challenging: "it can be a real problem getting children with autism to accept responsibility, and we often don't try – more than that, we don't let them take it" (Crossly 1997: 111). She describes how she insisted that Emma stopped relying on her facilitators to correct her. Emma didn't try to look at the keyboard after she had typed the first few letters of a word so Crossley moved her communicator so that Emma would make a mistake if she did not look. This was not easy but as Crossley says "it was certainly quicker and more efficient if we didn't let Emma hit the wrong letters, but that meant that she didn't have to take responsibility for her mistakes and she didn't have to improve her coordination" (Crossley 1997: 111). By the end of the session Emma could type words without any physical support and "the next day at school Emma spontaneously typed without any support. She continued to do so provided that the communicator was positioned low so that she did not have to lift her hand against gravity" (Crossley 1997: 112).

Burger Sellin recognises the importance of becoming independent when he writes: "I will only be able to live away from home when I have learned how to write by myself that's a fact because other wise everyone will say you are writing the things I write" (Sellin 1995: 65).

The video of Jamie Burke's "Journey to Speech Through Typing" provides an insight into how he achieved independence. Jamie began using FC at the age of five years. He could speak but did not use his voice as he says 'it was not useful'. He went to a 'regular' school where his "intelligence was assumed" and he was exposed to a language rich environment. He loved books which may be one reason his communications are so poetic in style. He

describes his exposure to printed word as being "like water in a desert". Jamie's journey to independence began with fading back physical support so that at times he only needed a touch on his shoulder. He also began typing with two hands; the rhythm of movement is described as having helped his coordination. He began reading what he was typing at the age of 12. He is now using his reading out loud to develop spontaneous speech with family and friends (Burke 2002). Jamie continues to type relatively independently, his mother will hold his light writer in a position (low down) so that Jamie can type without her physical support for short conversations, at other times she may support his elbows or place her hand on his shoulder depending on the situation.

Sue Rubin feels that "most nonverbal people with autism can learn FC with a patient and well-trained facilitator" and recalls how it took her "five years of gradually fading support to become independent" (Gillingham and McClennen 2003: 138).

IV. Emotional Supports

Tito Mukhopadhyay describes how he spent his time running around the tables of the therapy room when he went to a school for mentally retarded children. He clearly states that his behaviour was due to his feeling devalued: "I must say that the boy too felt insecure, and rejected every ability that once he was proud to display. He refused to communicate. The board communication after all was not considered to be valid, and he was not communicating with others when his mother was not holding the board that was a big and serious problem. For many times, he could not be used to someone else holding the board. The problem was that he needed time to get used to the person – his touch – and most important his voice" (Mukhopadhyay 2003: 45).

Jenn Sybert describes her life without communication as "24 years of a living hell. Imagine yourselves sitting in your seats and having your thoughts constantly interrupted by thoughts of terror, your own voice sounding like a thunder of garbled words being thrown back at you, and other folks screaming at you to pay attention and finish the task. You find your body and voice do unusual things, and you realize you aren't in control. People are screaming at you to stop the aggression, and they stick a raisin or lemon juice in your mouth, depending on your response. Now add to this that you cannot talk … maybe a few words … but nothing consistent with language. With all this in mind,

welcome to the world of a person with autism who is non-verbal" (Gillingham and McClennen: 101).

Jenn explains how her behaviour was very aggressive; she was very unhappy and frustrated. When she was introduced to FC her "world became unlocked in an instant. That is when my whole life opened up and the hell of being locked inside of myself disappeared." (Gillingham and McClennen: 102) She explains that it was not easy to allow herself to open her mind to new ways of thinking and she needed a lot of support both emotionally and physically. Her need for physical support has been reduced to nothing at times and she can now type independently in many situations. She is studying for a degree in psychology and hoping to take a masters degree in counselling so that she can support people like herself who were not able to communicate but now can. She is very clear that the emotional impact on her was severe and she wants to help others to express their feelings so they can move on (Sybert 2004).

V. Reliable and Unreliable Communication

Sue Rubin, Jamie Burke and Tyler Fihe have all presented on the differences between reliable and unreliable communication (Rubin et al 2003). They refer to repetitive typing and talking, echoed typing and talking, off topic commentaries and unintelligible speech as being unreliable and unintentional. They view typing as providing a means of conveying meaningful and intentional communication. Jamie refers to his repetitive speech as "words of annoyance". One example of this can be seen on the video. Jamie is in an English class repeatedly saying, "Mickey turns into Frankenstein" but is actually typing an assignment about Edgar Allan Po. He suggests that facilitators need to spot when his speech is unreliable and unintentional. Waiting and being given the initial sound or syllable of a word often helps him to say it out loud. Tyler finds speech very difficult but "sometimes a blooming miracle happens and my mouth works"(TASH 2003). Breaking words down into syllables is also helpful not only to learn the sounds of speech but also to learn spelling (Rubin et al 2003).

Crossley (1997) notes how Jill, a 14 year old with autism would be saying one thing and typing another: 'what was disconcerting was Jill's speech. If we asked her a question, she would say the wrong answer while typing the correct one. While she was typing she would even say a wrong letter aloud when hitting the right one" (Crossley 1997: 209)

VI. Facilitator Influence

Crossley accepts that facilitator influence cannot be discounted and distinguishes between deliberate conscious cueing and subconscious cueing: "deliberate conscious assistance is probably rare, if only because it is likely to be obvious. The degree of movement and control needed to direct another person's finger to a given typewriter key, without any participation by that person, is considerable. For complete accuracy it would be necessary to grasp the person's finger. Subconscious cueing, however, would in its nature be more subtle, and hence more difficult to detect. It could only work with a cooperative subject – a person who was interested, for whatever reason, in taking cues, and who voluntarily moved a finger toward the communication display or keyboard" (Crossley 1997: 217).

Marcus (1997) identified three barriers to increasing his success on a picture naming. One of the barriers was needing to find a way for his facilitator (Shevin) "to support my typing without fouling my stream of thought" (Marcus and Shevin 1997: 124). Marcus is clearly saying he could tell from Shevin's touch what Shevin anticipated he would type. He describes it as "like trying to sing 'O Canada' when the band is playing 'The Star Spangled Banner' … it's not going to work if the band is too loud". So if Shevin was anticipating too strongly what Marcus was going to type he could not type what he wanted if it was different to what Shevin was anticipating.

The second barrier was "my own messy method of word finding" (p124). Again he says that he was reading Shevin's tiny hand movements and "other indicators of what he was thinking. So I had to substitute my clear thinking for his" (p124).

The third barrier was "not knowing how I could get physical support without being overcome by Shevin's speculation" (p124). He explains that he needs physical support from a facilitator like a blind person might use a guide dog to "keep oriented". He describes how it can feel comfortable to let others take the lead but clearly states that he needed to tell his facilitator to "back off".

Facilitator influence is almost redefined by this study, it is certainly the first one I have come across in which a user of FC openly acknowledges the influence he feels from his facilitator and then tries to understand it, describe it to others and to reduce it. In so doing Marcus acknowledges his fears of

independence and the need to be emotionally ready for this. He usefully frames his ability to detect what someone expects from their touch as no different to having a conversation with someone using speech "finding what someone expects from their touch is no different from hearing their anger in their voice or smelling their fear in their sweat. Most ideas are not feeling free ... So if I can pick up feelings, it is frankly easy to capture their associated ideas" (Marcus and Shevin 1997:132).

This selection of personal accounts provides helpful pointers towards understanding how FCT works. It will now be considered how the research and evidence so far presented can be described by psychological theories. It is very important to identify a theoretical basis for why FCT appears to support some people.

H. Current Theories About FCT

There seem to be four potential theories that could contribute towards explaining why FCT enables some people to communicate. One theory is that it enables people to manage neuromotor impairments, another is that it helps people to manage sensory and perceptual issues, a third theory is that it helps people to manage movement differences and a fourth this that helps people to manage impairments in executive functioning.

I. Neuromotor Impairments

A wide range of neuromotor impairments has been found to affect a person's ability to point reliably (Crossley 1994, Stanton and Jacobsen 2005). The following have been taken from the Course Training Manual written by Stanton and Jacobsen (2005).

- Contractures lead to a range of movement limitations and the constant loss of joint motion due to changes in muscles, ligaments and tendons.
- Paralysis leads to a loss or impairment in the control of voluntary movements.
- Involuntary movements lead to turns of the head, flailing arms etc.
- Tics lead to abrupt, sudden, jerky repetitive movement or vocalisation involving discrete muscle groups and include simple motor tics such as eye blinking, shoulder shrugging and complex motor tics such as jumping, touching, squatting, liking or smelling objects.

- Asymmetrical tonic neck reflex leads to a reflex extension of the arm following the pointed direction of the chin when turning the head to one side or vice versa.
- Dystonia leads to slow, rhythmic involuntary muscle contractions, which force certain parts of the body into abnormal, sometimes painful, movements or postures. Dystonia can affect any part of the body including the arms and legs, trunk, neck, eyelids, face or vocal cords.
- Fluctuating tone leads to muscles fluctuating between high and low tone and is often associated with dystonia or contractures. Low tone makes it difficult to lift limbs and put physical pressure on things (hypertonia). High tone makes it difficult to be accurate when pointing, sometimes over shooting the target or pushing the aid away due to the force of the movement (hypertonia).
- Tremors can either be continuous tremors or intention tremors where the hand is stable while at rest but trembles when the person tries to do something such as point.
- Fatigue and endurance occurs when muscles tire from repetitive use, over use, lack of use or from intense concentration on achieving a tasks.
- Impaired hand-eye co-ordination leads to a person pointing without looking or without allowing enough time between movements to scan the display and locate the target. Some people cannot look and point at the same time (e.g. those with asymmetrical tonic neck reflex) however they can learn to look just before they point to improve accuracy. Some people maintain that they find it easier to use peripheral vision. However, more accuracy and independence is likely to develop with increased looking skills.
- Difficulty isolating and/or extending an index finger can be caused by instability at the base of the index finger, which leads to difficulty extending the index finger while flexing other fingers. It can be hard to use the index finger to point without the other fingers also extending or when the finger droops so that a selection below the one intended is made.

- Proximal instability of the shoulder and/or trunk can due to muscle weakness, which can often result in an over arm pointing action rather than a more controlled underarm action.
- Unstable sitting position can be caused by muscle weakness or spinal problems.
- Undecided hand dominance can result in using two hands for a task only requiring one. Both hands come up at once and it is hard to isolate one or the other.
- Ataxia leads to a lack of coordination caused by dysfunction to sensory nerve inputs, motor nerve outputs or the processing of them. It is not the result of muscle weakness. Ataxia is most often applied to unsteadiness in walking but it also refers to the upper body, eye movement and speech dysfunction.
- Dysmetria leads to a lack of coordination of movement typified by under or over shooting the intended position with the hand, arm, leg or eye. Dysmetria of the hand can make writing and picking things up difficult or even impossible.
- Radial ulnar muscle imbalance leads to an unequal pull on muscles. The muscles in the hand and wrist or forearm do not co-ordinate well together causing the index finger to swerve resulting in selections off to the side of the target or the hand droops from the wrist making the tip of the index finger invisible to the user who is then pointing blind.

This comprehensive overview of neuromotor impairments and how they can affect a person's ability to point makes it clear how FCT can be used to help people with cerebral palsy and other physical conditions to make sustained intentional movements.

There is also growing evidence to suggest that many pupils with autism have undiagnosed neuromotor impairments which can include appearing clumsy and having difficulties with performing complex or multiple motor tasks (Fulkerson & Freeman 1980, Maurer & Damasio 1982). Asperger's (1944) original description of autism included "poor motor coordination". People with autism have also been reported to display more selected components of dyspraxia than their peer control groups (Jones and Prior 1985). This could explain why people with autism also benefit from FCT.

Supporting the development of physical movement patterns has also been the focus of the work of Ludo Vande Kerckhove who has developed an FC training programme solely focused on this aspect of supporting people in Germany.

II. Sensory and Perceptual Issues

Many people with autism are being recognised as experiencing significant sensory and perceptual strengths and difficulties (Bogdashina2003) to the extent that some authors describe autism as a disorder of the senses (Delcato 1974) rather than a social dysfunction, where each sense operates in isolation and the brain is unable to organise the stimuli in any meaningful way (Hatch-Rasmussen 1995). Many autistic authors consider autism as largely a condition relating to sensory processing (Gerland 1997; Grandin 1996; Williams 1999). Olga Bogdashina (2003) had compiled and overview of the sensory and perceptual issues affecting people with autism. As well as the main senses of vision, hearing, touch, small and taste she has also included proprioception (a kinaesthetic sense that relates to a person's awareness of body position, movement and posture) and a vestibular sense (the sense of balance and gravity). She has identified a range of perceptual issues that can affect each individual sense:

- Gestalt perception – inability to distinguish between foreground and background information – relevant and irrelevant
- Hypersensitivity – heightened
- Hyposensitivity – low
- Disturbance by certain stimuli
- Fascination with certain stimuli
- Inconsistency of perception e.g. different reactions to same stimuli
- Fragmented or partial perception
- Distorted perception
- Sensory blindness – difficulty interpreting, getting the meaning from a stimulus
- Delayed perception e.g. delayed responses
- Vulnerability to sensory overload
- Mono processing – the number of channels working at the same time
- Peripheral perception (avoidance of direct perception)

- Systems shutdowns e.g. switching off when experience sensory overload
- Compensating for unreliable sense by using other senses
- Losing oneself in stimuli (resonance)
- Daydreaming, fantasies
- Cross sensory perception
- Perceptual memory
- Associative memory e.g. sensory stimuli trigger memory
- Perceptual thinking

Bogdashina (2003) puts forward the theory that each sense can be affected by any of the perceptual issues identified and can have a significant affect on a person's ability to communicate. For example, Tito's explanation above of how he needs to be touched in order to know where parts of his body are in space in order to be able to point or type supports the theory that difficulties related to proprioception can inhibit a person's ability to communicate through pointing. This has direct relevance to FCT. Stanton and Jacobsen (2005) list some of the sensory and perceptual issues they believe may be supported by FCT:

- Visual issues include difficulties with scanning the communication display. There may be difficulties with seeing certain colours, fonts or areas of the display. People with visual spatial impairments have great difficulty localising objects in two and three-dimensional space.
- Proprioception leads to difficulties in locating and positioning parts of the body. Sometimes repeated physical movements such as hand flapping, tapping, biting, rocking may indicate proprioceptive problems.
- Tactile sensitivity can result in the pupil needing a firmer touch/grip because soft physical touch is uncomfortable for them. They may also be more willing to touch some objects more than others.

III. Movement Differences

Donnellan and Leary (1995) have been instrumental in identifying a range of movement differences that can affect all of us but particularly people they describe as having autism and/or mental retardation. These include difficulties with:

- Starting – not being able to start a song until someone gives us the first line
- Stopping – getting a thought or tune in your head that will not go away
- Executing (speed, intensity, rhythm, timing, direction, duration) – dancing the right steps in time to the music
- Switching – becoming absorbed in what one is doing to the point where it is hard to stop and move on to something else
- Combining – not being able to listen to music while driving and looking for a road turning in an unfamiliar area

They suggest that it is movement differences such as these that make it very difficult for some people to perform an action without some accommodation. Accommodations are described as the actions taken by others to support a person to perform an action. They include the use of FCT as one accommodation, which can help people to overcome these movement differences in relation to communication. For example they note: "a hand touching Franco's back helps him pay attention during conversations; typing with support helps Dylan to speak, while typing and touching another person helps Andre to initiate speaking (Donnellan and Leary 1995 p74).

Stanton and Jacobsen (2005) have identified all of the movement difficulties as being supported by FCT and include:

- Apraxia is a neurological disorder characterised by the inability to perform learned (familiar) movements on command, even though the command is understood and there is a willingness to perform the movement.

Biklen has repeatedly suggested that apraxia can explain the difficulties experienced by a wide range of people including those with Downs Syndrome and autism. Apraxia means "without action" and "refers to absence of or difficulty with achieving voluntary action" (Biklen 1997 p72). However because it is defined as an inability to initiate learned movements it is not an executive function.

IV. Executive Functions

Executive functions are the underlying processes needed for individuals to perform actions, which are flexible and adaptive to new or difficult situations

(Hughes et al 2004). These actions are not the habitual behaviours that involve automatic responses, which need little thought or conscious processing. The types of actions that require the use of executive functions include learning new skills, planning and decision making, overcoming strong habitual behaviour and initiating new sequences of actions. Hughes et al 1994 describe executive functions as being: "mental operations which enable an individual to disengage from the immediate context in order to guide behaviour by reference to mental models or future goals". These mental operations include:

- Working memory – the capacity to hold information "on line" in mind, while performing another mental operation or activity (Bennetto et al 1996)
- Inhibition – the ability to inhibit response to irrelevant stimuli in order to complete a planned action (Hughes et al 2004)
- Planning – the ability to plan out a series of actions to achieve a desired goal without distraction (Joseph 2004)

There is a growing body of research that strongly associates autism and executive function deficits (Hughes et al, 1994, Ozonoff, 1996, Joseph et al 2004). A study by Joseph et al (2004) also confirmed "higher level executive functions are directly related to the severity of communication symptoms in autism" (Joseph et al 2004: 152). In other words not only do people with autism have difficulties with working memory, inhibition and planning, those with more severely impaired speech have more difficulties with activities that involve these mental processes.

This could be why some people with autism have benefited from FCT. For example, the lack of ability to complete an action without being distracted and the lack of inhibition in particular are present in many people with autism who find it very difficult to ignore visual and/or auditory stimuli (this also overlaps with the sensory and perceptual issues theory) to the extent that many compulsively have to touch and/or look at objects that attract them. They have real problems with inhibiting unplanned responses to irrelevant stimuli such as perseverative movements and unintentional speech. There is considerable overlap between the sensory and perceptual issues theory and it is possible that combining the two would give a rich explanation of what may be causing difficulties in enabling a person to communicate. For example, visual

sensitivities may be the cause of a person being distracted so that they are not able to complete a planned movement. FCT may inhibit the responses that are not relevant to the task in hand.

Stanton and Jacobsen (2005) refer to difficulties, which can be described as executive functions (specifically disinhibition and planning) that can be supported by FCT. These have been re-written below to include a reference to which executive function might be impaired:

- Visual disinhibition involves not being able to ignore some visual stimuli and can lead to a lack of concentration on one relevant idea or stimulus
- Auditory disinhibition involves not being able to ignore some auditory stimuli and can lead to a lack of ability to concentrate on one conversation or set of instructions.
- Peseveration is a form of disinhibition that involves not being able to stop a movement or thought once started and can lead to a person repeating certain selections or tending towards certain selections. This looks like repetitive behaviour.
- Impulsivity is a form of disinhibition that involves the person responding before they have had time to consider the options or aim accurately.
- Movement planning difficulties include motor planning or praxis, which affects the ability to conceive, organise and carry out a sequence of unfamiliar actions. This can result in a reduced ability to carry out non-learned movements even though there is adequate motor and conceptual capacity to do so. This is often characterised by initiation problems.

This theory could also explain why some FCT users with autism do become independent in their typing due to the possibility that the activity has become more habitual and therefore less reliant on executive functions.

There is a striking overlap between the movement differences theory and the executive functions theory. Issues of starting, stopping, executing, switching and combining could all be related to impaired executive functions.

I. Summary

FCT has developed since Rosemary Crossley first introduced physical support to enable Anne McDonald to communicate. There has been an intense focus on the issues of authorship, which are still being contested today and have resulted in an unhealthy polarisation between quantitative and qualitative researchers. However some quantitative studies are beginning to find new ways of studying the process of FCT (Grayson 1997), which may lead to a closing of the rift in the future.

The qualitative evidence generally demonstrates authorship and the accounts by FCT users, some of whom are now independent in their typing are beginning to lend weight to the evidence that FCT can benefit some people with severe communication impairment. People with physical impairments and autism have been found to benefit from the support provided by a facilitator.

There is considerable overlap in the theories that may help to explain why FCT supports some people with neuromotor, sensory and perceptual, movement and executive functioning differences and difficulties. The executive functions theory appears to combine elements of the other theories. The neuromotor and executive functions theory may be the most robust in offering explanations for why FCT benefits some people at this point in time.

METHODOLOGY

A. Methodological Issues

There is a long-standing debate within social sciences including psychology about the way in which research could and should be conducted. This relates to what Cohen et al (2000) refer to as two distinct views of social reality and consequently two ways of interpreting the world around us. They suggest that the methodology a researcher chooses to use is dependent upon their view of social reality. The debate surrounding the validity of FCT appears to typify the extreme views about positivist, quantitative research and anti-positivist, qualitative research. It is therefore important to provide a brief overview of this debate and the rationale for the choice of methodology for this study.

The positivist stance has been criticised for its mechanistic approach "which by definition, excludes notions of choice, freedom, individuality, and moral responsibility" (Cohen et al 2000: 17) it has also been criticised for not treating people as human beings, failing to take account of our ability to interpret our experiences; of viewing people as objects that are repetitive and predictable. Some authors quoted by Cohen et al (2000) have taken the extreme stance of accusing positivism as being responsible for depersonalisation within society (Ions 1977) retarding the increase of our awareness and degree of consciousness (Holbrook 1977) and alienating life until reality becomes "a universe of congealed alienation" (Rozak 1970). The findings produced by this method of enquiry are said by some to be "so banal and trivial that they are of little consequence to those for whom they are intended" (Cohen et al 2000: 19). Silverman (2000) records some criticisms of quantitative research as follows:

1. Quantitative research can amount to a 'quick fix', involving little or no contact with people or the 'field'
2. Statistical correlations may be based upon 'variables' that, in the context of naturally occurring interaction, are arbitrarily defined
3. After-the-fact speculation about the meaning of correlations can involve the very common-sense processes of reasoning that science tries to avoid (see Cicourel, 1964: 14, 21)

4. The pursuit of 'measurable' phenomena can mean that unperceived values creep into research by simply taking on board highly problematic and unreliable concepts such as 'delinquency' or 'intelligence'
5. While it is important to test hypotheses, a purely statistical logic can make the development of hypotheses a trivial matter and fail to help in generating hypotheses from data (see Glaser and Strauss, 1967)"

(Silverman 2000: 7)

He follows these criticisms by noting that good quantitative researchers are aware of these criticisms and try to overcome them. However he acknowledges a reliance on quantitative logic alone would "rule out the study of many interesting phenomena relating to what people actually do in their day-to day lives" (Silverman 2000: 7).

The anti-positivist/qualitative stance has been criticised for being confined by the social reality presented by participants and as having "gone too far in abandoning scientific procedures of verification" (Cohen et al 2000: 27) by basing analysis on subjective reports which are sometimes incomplete and misleading (Argyle 1978).

Reliability is questioned in terms of the degree of consistency. For example, would different researchers assign the same categories when analysing data? (Silverman 2000: 9) Hence the reliability of interpretation of data is questioned. For example, some researchers allude to telling examples in transcripts with no attempt to analyse clear or contradictory data. Bryman (1988) refers to this as a tendency towards an anecdotal approach and questions the representativeness and generality of these 'snippets of data'.

These differences in views are not as always polarised, as some authors would suggest. All researchers do not have to choose to be either a positivist or anti-positivist. Many researchers including educational psychologists would see themselves at varying points along a continuum between the two and would select the method and approach that most suited their research questions.

Norwich (1998) in discussing research methods in educational psychology argues that both approaches can be employed as follows:

"Starting from an interpretivist stance, common inter-subjective meanings can be found, which can become the basis for constructing an objective definition and measurement. Starting from an objectivist stance, the measurement of beliefs and perceptions of a social phenomena can become the basis for exploring how particular members of a group make sense of that phenomena." (Norwich, 1998 p13)

Norwich argues for a constructive co-existence where there is an understanding and appreciation for both stances and recognition of the connections between them: "By this I mean that the science paradigm cannot achieve the purism that comes from eradicating all subjectivity, because there is no sense to be made of an objectivity which is not from some human perspective. Similarly, the interpretivist paradigm cannot achieve purism that comes from denying that subjects relate to objects, that humans have perspectives in relation to something. Otherwise there is a slide into a position which cannot even describe the perspectives and the meaning-making of others." (Norwich, 1998 p14)

Increasingly authors are advocating, "the choice between different research methods should depend upon what you are trying to find out" (Silverman 2000 p1). Others assert that researchers should not have to choose between qualitative and quantitative approaches, on the contrary, both methods could be employed to the extent that they could compliment each other. For example, Clarke (2004) states that the distinction between quality and quantity is not mutually exclusive because "one can describe things qualitatively or quantitatively, and often the two blend into each other" (Clarke 2004: 81). This view is supported by Robson (2000) who states "there is no rule that says that only one method must be used in an investigation. Using more than one method in an investigation can have substantial advantages … one important benefit of multiple methods is in the reduction of inappropriate certainty. Using a single method and finding a pretty clear-cut result may delude investigators into believing that they have found the 'right' answer" (Robson 2000: 290). Some critics say it is inappropriate to combine methods based on different theoretical positions (Blaikie 1991). However, multiple methods can be used to address different but complementary questions – what Robson refers to as the

"complementary purposes" model. This can enhance interpretability and "assess the plausibility of threats to validity of the primary research technique" (p291).

Such willingness to embrace the best of both worlds is, in my view, to be welcomed, however there does not appear to be much equity between the findings of quantitative and qualitative research in relation to FCT. If anything some quantitative researchers have used their methodology to exert power and control over the implementation of FCT to the extent that the debate about authorship has overshadowed the descriptive and illuminative studies.

B. Approaches to studying FCT

The controversy about authorship has increasingly placed the onus of responsibility on supporters of FCT to prove that facilitators were not influencing communicators. The debate has become even more polarised between quantitative positivist experimental and qualitative ethnographic case study approaches to research. The whole issue of how disability is constructed and measured has been called into question in this debate. Qualitative researchers question the validity of one-place-in-time experimental designs, whilst the quantitative researchers are demanding 'scientific' facts and figures through rigorous controlled experiments.

What constitutes empirical evidence at this stage in the development of an intervention? The assumption of empiricism means that the "tenability of a theory or hypothesis depends on the nature of the empirical evidence for its support" (Cohen et al 2000: 10). The quality of a theory is determined by the state of development of the particular discipline. The early stages of theory development are dominated by empirical work (the accumulation and classification of data). Which is why much educational research is descriptive (Cohen et al 2000). It could be suggested that FCT is still in the developmental stage and that much more observation needs to be conducted before the authorship debate can be resolved.

As Clarke (2004) points out by quoting George Miller:

> "In truth, a good case could be made that if your knowledge is meagre and unsatisfactory, the last thing in the world you should do is make

measurements. The chance is negligible that you will measure the right things accidentally. (George Miller, 1962 p 79)"

Biklen (1997) is clear that the issue is not whether to test but how to monitor and evaluate outcomes in relation to FCT not just for the users but the facilitators, educators, parents etc. He expresses his concern that the research debate has influenced how FCT is becoming defined: "the effect of the research debate ... framed all discussions of FC in terms of 'validity' or 'invalidity'" (Biklen 1997 p 27). In other words the tests of validity of FC became its defining feature. FC was being defined by people's ability to identify pictures, pass messages, name objects etc. under controlled conditions.

Biklen and Crossley make the comparison with intelligence testing by presenting the argument that intelligence has become defined by the IQ test. They suggest that intelligence is a social construction that predisposes us to assume that intelligence can be defined, measured, quantified and is fixed for life. As Biklen states "facilitation is, of course, newer and not yet as monolithically defined. Yet ideas about testing the method have led to assumptions that people are either 'communicating' or 'not communicating' and 'influenced' or 'not influenced', implying that influence in communication is abnormal, bad, a type of contamination. Failure to pass a test is taken as evidence that the method does not work and that the people using it are truly retarded (Klewe, 1993; Smith et al 1994), unfortunate pawns of a fraud (Green and Shane 1994), prisoners of their facilitators (Palfreman, 1993) or vehicles of other people's words (Smith et al 1994)" Biklen 1997: 27-28).

The emotive language used in this debate including accusations of fraud, hoax, anti-science and the likening of FCT to Ouija boards reflects the inability of some experimental researchers to consider alternative explanations and highlights the historical and socio-cultural contexts that exist in relation to research. Why do parts of the scientific community remain unwilling to consider the increasing professional and personal accounts of positive outcomes because they are not quantitative or, more specifically, because they are not based on an experimental

model of research? Perhaps it is due to the fact that experimental research can be replicated which leads, in Clarke's view to its ongoing development and use:

"Science is a cultural replicator. Operationalised procedures that are easy to disseminate make good replicators. Methods which require insight and creativity to produce novel results do not. Research that makes good sense will always be under threat from research that makes a good band wagon" (Clarke 2004: 85).

Perhaps it is also due to the belief that only experimental methods can allow causes to be matched with effects (Clarke 2004) and also the lack of acknowledgement that "the price that has to be paid for doing this, in terms of artificiality and inappropriate explanatory frameworks, can sometimes be very high indeed" (Clarke 2004: 82).

Another historical and socio-cultural context that may help to understand the rift between researchers in the field of FCT is that pertaining to disability in general. Crossley suggests that new interventions related to increasing communication for disabled people tend to follow a particular pattern in the way they are received by different segments of society. She suggests that there is an identifiable sequence to how researchers, practitioners and the community respond to new interventions:

- Unsystematic interventions (random application of new ideas)
- Introduction of new communication systems (more systematic interventions to more people)
- Positive community response (the miracle)
- Negative professional response (the hoax)
- Battle for the 'truth' response (the time will tell, based on evidence from informed research and personal successes)

Examples of such patterns of responses to new innovations can be found in the special educational needs/disability literature and serve to demonstrate that FCT is not the first approach to supporting increased communication that has been met with scepticism and controversy.

Consider the introduction of education to deaf people who had been assumed incapable of learning by society. One of the first recorded accounts to educate deaf people occurred in France in the late 18th century when the Abbe de

L'Epee learned the local sign language and used it to teach deaf-mutes to read and write. Thus demonstrating that they were not mentally incapable of learning, and written language could be acquired without speech. The later speech/sign debate illustrates the effect professionals can have on people's access to communication strategies, with many deaf people being refused access to signing due to the belief that all interventions should be directed towards developing speech.

Consider the introduction of alternative communication strategies for children with severely impaired speech in the late 1960s, which began with large communication displays and now includes personal computers and speech synthesisers. Interestingly the introduction of non-speech strategies for people who were not deaf met with similar resistance and controversy as the speech/sign debate in educating deaf children and it was not until the 1980s that augmentative and alternative communication became accepted.

Consider the response of society towards people with cerebral palsy, many of whom were assumed to have limited intellectual abilities if they had severe speech impairment. Despite the knowledge that lack of speech does not automatically indicate lack of intellectual ability many children with little or no controlled movement and no comprehensible speech continue to be viewed as severely physically handicapped and therefore assumed to be severely mentally handicapped (Crossley 1997: 37).

This historical and socio-cultural perspective provides a context within which FCT should be considered. In the past it has taken professionals considerable time to influence the prevailing notions and beliefs about ability to the extent that education for disabled people has been largely based on a deficit model. Society is a long way from adopting the principle of the least dangerous assumption (Donnellan 1984) which promotes that disabled people should be presumed competent in the absence of clear evidence to the contrary in order to minimise the harm caused by the most dangerous assumption which is that disabled people are not competent until they are able to demonstrate or prove their abilities.

One of the reasons why the rift between quantitative and qualitative researchers or, more specifically, between experimental and descriptive ways of understanding FCT exists could therefore be because of the historical and socio-cultural context of disability. Disabled adults who are now very vocal in their views are actively challenging many 'ingrained' assumptions about disability including the following:

- Intelligence can be measured and is measured by intelligence tests
- Inability to speak is indicative of low cognitive ability
- People who "look or sound" disabled are cognitively less able
- People who can't talk/communicate effectively through speech can't learn to write or spell
- A person needs to be able to speak before they can type
- What people say reflects their cognitive abilities
- Repetitive echolaic speech is an indicator of low cognitive ability and limited understanding of words and concepts (Biklen 1993:16)
- If a person can perform an act of communication with one person they should be able to do the same with many on demand – effective communication is easily generalised to a range of situations and people
- People who can't speak have nothing to say
- There is a continuum of autistic spectrum disorders from low to high functioning. Low functioning people with autism have no speech or dysfunctional speech. (Biklen 1993:16)
- If a person can communicate through typing they should be able to take care of their own basic needs and control their behaviours – how can a person who can't wash themselves be intelligent enough to type? (Biklen 1993:14)

It is therefore not surprising to find such an animated and often polarised response to an intervention, which seems to provide some disabled people with an effective means of communication. It could be argued that it is more socially; culturally and politically acceptable to use experimental procedures to refute

claims, which will challenge the status quo of the belief systems, related to people with severe communication impairments.

The historical and socio-cultural context in relation to research and disability begins to provide some reasons why FCT is so vehemently debated. If the two contexts of research and disability are combined there appears to be an even more persuasive argument for the polarisation of views and beliefs.

Kliewer and Drake (1998) combine the historical and socio-cultural contexts of both research and disability and suggest that the reaction by some professionals is a "legacy of positivism as a technical, rational foundation for the disability related disciplines which has meant that any idea, theory, practice or strategy that contradicts traditional special education empiricism can be, and is dismissed as anti-empirical" (Kliewer and Drake 1998: 96). They point out that critics have linked de-institutionalisation, school inclusion and FCT together as "anti-science". They argue that the "use of scientism to hide ideology in the disability professions is the legacy of the eugenics movement" (Kliewer and Drake 1998: 98). In other words people who were 'scientifically' identified as mentally retarded did not have a place in society and needed to be contained in institutions for their own good. They assert that the fact disabled people were subjected to "rigid, controlling, dehumanising conditions" appears to be irrelevant because those who have been able to tell their stories are from outside the disability profession and their accounts are regarded as anecdotal and non-scientific. "In labelling the accounts 'non-scientific', the profession could then safely ignore the rich and terrifying descriptions of the horrific existence that awaited inmates of custodial institutions" (Kliewer and Drake 1998:103). They cite numerous authors who have detailed the exposure of inmates to various diseases, the testing of vaccines and the conditioning experiments designed to change deviant behaviour some of which used electric shocks.

Kliewer and Drake are likely to be regarded as expressing an extremist view as many people would not want to read and/or believe such accounts. However this context is important in that it is difficult to dismiss the accounts presented by disabled people who are now living their lives as they choose (e.g. Judith Snow

TASH 2002). The essential point of their argument is that critics of desegregation "appear to fear the voices of those challenging the social practice of controlling through segregation individuals with disabilities. It is then not surprising that the voices of people with disabilities, given strength, clarity and volume through facilitated communication training, have been grouped by these professionals alongside community and school inclusion as representatives in an unholy trinity of antiscientific practice" (Kliewer and Drake 1998: 105).

They refer to initiatives related to inclusion as being perceived as a direct challenge to "the science of segregation" which supports the notion that difference must be stigmatised, contained and eliminated from community" (p107). Such challenges, they argue, are considered anti-professional and anti-scientific. This includes "ignoring the accomplishments and words of people with disabilities who have demonstrated that they indeed are the authors of their typing". Omitting and disregarding personal accounts by FCT users is described as "professionally induced silence" and "scientism – the rhetoric of natural sciences used to cloak an ideology of control through segregation" (Kliewer and Drake 1998:108).

C. Selecting methodologies for this study

So where does this debate about methodology, so openly contested in relation to FCT, lead in selecting an appropriate methodology for this study? An attempt has been made to select methodologies that are fit for purpose and rise to the challenged posed by Clarke (2004) who advocates for a psychology and methodology, which strives for "accurate descriptions and valid explanations … where qualitative and quantitative methods are mixed and used together" (Clarke 2004: 83). He asserts that psychology should be obliged to find out what is of general benefit or interest and "not just pursue more and more arcane minutiae of the subject in the hope of greater scientific credibility and respectability" (Clarke 2004:84). Also "rigour is not everything. Saying only what you can say with (a high degree of) certainty is often less important and less useful than doing the best you can with the information available, and in the time available" (Clarke 2004: 84).

Clarke (2004) points out that people (the socio-cultural perspective again) "expect psychologists to be insightful, to notice and understand what they would

miss". However he suggests that the reality is often quite the reverse in that we (psychologists) acknowledge less human nature than the person in the street because our "threshold of belief" has been set inappropriately high to the extent that we (psychologists) "would rather miss much of what is true in the world, than believe a little of what is false" (Clarke: 85). "Understanding complex episodes of human behaviour requires synthesis just as much as analysis" (Clarke: 85). In other words we should always be trying to piece things together (to see what they are part of) as much as we are trying to pull things apart (to see what they are made of).

In relation to this study FCT can be seen as what Clarke (2004) describes as a "visible product of unseen processes" and the task is to use a method that will move from individual descriptions to generalised accounts of the underlying processes. This move requires two steps according to Clarke (2004) the first step is from the particular to the general the second step is from the description to the explanation. In most research Clarke (2004) notes that the data is put together (aggregated) to deduce explanations but this methodology can obscure the structure and intricacies of each case. Alternatively analysis of data could be done by looking at the each case (as in multiple case studies) and move from description to explanation only later drawing together all the cases to explain and conclude (Clarke 2004: 87).

Crossley calls for longitudinal research, which looks at the ability of people to communicate in a variety of settings, with a variety of partners on a range of topics over time. Stating that "in an ideal world, people would have withheld judgement about the general usefulness of facilitation in non-speech communication until this research had been completed and there had been time enough to see if facilitation produced any improvements in speech or independent typing' (Crossley 1997: 262).

Action research provided a structure and process for the implementation of the project as a whole. The goals for the action research project guided the choice of methodology used to contribute towards the summative and normative evaluation. A collective case study methodology was used as a complementary

evaluation tool to the action research method. There were significant overlaps between the action research and collective case study methodologies. For example, the survey used to aid the selection of a pilot sample of pupils for the case studies was developed through a collaborative action research process. A similar process was used to develop the pupil outcome measures for each individual case. Multiple sources of evidence were used to inform the analysis of the essential elements of action research process and the pupil, adult and process outcomes. Both methodologies are essentially qualitative, however it was possible to use some of the evidence in a quantitative way to provide another perspective on the evaluation as a whole. A visual overview of the project is provided in Figure 3:1 Project Map

RESEARCH QUESTION

How can FCT be introduced as a normally available resource for young people with severe communication impairments in Nottingham City schools?

GOALS OF ACTION RESEARCH PILOT PROJECT

To explore ways of introducing FCT within the local authority in order to enhance the communication of young people who have been identified as not having had access to the means of reaching their communication potential

To evaluate outcomes for young people, teaching staff, parents and schools

To monitor and evaluate the process of how FCT is introduced (identify factors that help and/or hinder)

To identify ways of ensuring sustainability (who and how to involve others in the project to sustain practice)

ACTION RESEARCH METHODOLOGY

COLLECTIVE CASE STUDY METHODOLOGY

ANALYSIS OF ESSENTIAL ELEMENTS OF ACTION RESEARCH
- Communication
- Leadership
- Cycles
- Relationships

Budgets and resources

Selection of pilot sample

Training and support

Outcome measures

Research log
Observations
Documentation
Structured Interviews
Survey questionnaires

ANALYSIS OF PUPIL ADULT AND PROCESS OUTCOMES
- Within cases
- Across cases

MULTIPLE SOURCES OF EVIDENCE

FIGURE 3:1: Project Map

D. Action Research

Action research is predominantly associated with qualitative methodologies because it acknowledges the researcher and participants as having active roles in the research process. Action research is regarded by some as a "much more honest way of approaching research" (Hayes 2000:196). It allows the researcher to promote change at the same time as maintaining the traditional researcher role of describing, understanding and explaining. It implies the application of tools and methods of social science to immediate, practical problems, with the goals of contributing to theory and knowledge in the field of education and improving practice in schools (Kemmis 1980).

Oja and Smulyan (1989) describe action research projects as having three general aims:

1. Staff development
2. Improved school practice
3. Modification and elaboration of theories of teaching and learning

These aims are more broadly expressed by Zuber-Skerritt (1996) as being "to bring about practical improvement, innovation, change or development of social practice, and the practitioners' better understanding of their practices" (p83).

Some authors openly recognise the political power of the researcher, which has become only too evident in the FCT debate (Uzzell in Breakwell et al 2000) and define one of its aims as being to maximise social justice (Grundy 1987) by requiring participants to question and challenge value systems and beliefs. It is also concerned not only with changing individuals but also the culture of groups or institutions and societies (Kemmis and McTaggart 1992). In this respect this action research project falls within the description given to emancipatory (critical) action research as opposed to reflective action research (Kemmis 1997). In other words it is not only about improving practice but also challenging people's assumptions and values in relation to disability and people with severe speech impairments.

The action research cycle was originally developed by Lewin (1946) and involved a diagnostic stage, followed by the development of a change strategy, which included a planned intervention, and finally an evaluation stage. The

evaluation stage leads onto another diagnostic stage so the whole cycle begins again. The spiral of cycles involving planning, acting, observing and reflecting expects changes to occur as the research project develops over time. Lewin advocated the use of group work because of the acknowledged power of group interaction in producing commitment and changes in attitudes and behaviour.

Oja and Smulyan (1989) identify four basic elements of action research as being collaboration, focusing on practice, professional development and project structure. Collaboration allows for mutual understanding and consensus, democratic decision-making and common action (Carr and Kemmis 1986). It involves the researcher and participants in agreeing common goals and mutually planning the research design, collecting and analysing data and reporting the results. In this way participants are involved in every stage of the research process, which allows for a connection between theory and practice through reflective thinking. There is an implicit assumption that the researcher and participants will communicate 'frequently and openly' throughout the process to avoid possible conflicting perceptions and assumptions which result from their different positions in the field (Oja and Smulyan 1989).

Action research aims to change and improve practice. It should inevitably lead to professional development for those taking part. There is growing evidence from teachers that they benefit from being involved in action research projects in the following ways:

- Developing more flexible thinking; being receptive to new ideas and increasing ability to problem solve (Groarke et al 1986: Pine 1981)
- Increasing feelings of self-worth and confidence
- Increasing awareness of and/or changes in specific educational beliefs
- Broadening views on teaching, schooling and society

(Noffke and Zeichner 1987)

As well as being of benefit to teachers, action research should also benefit the organisations involved and the community (Hall 1975). This will however depend on the extent to which administrators such as head teachers are involved and supportive of the project.

Successful action research is seen as dependent upon the project structure, which Oja and Smulyan (1989) state should consist of at least the following four elements:

1. Frequent and open communication which can take the form of meetings, informal discussions etc. One vital aspect of communication is the need to articulating clear and specific goals from the outset (Wallat et al 1981)
2. Democratic project leadership by someone who can model collaborative working by sharing power and responsibility (Ebbutt 1985)
3. Spiralling cycles of planning, acting, observing and reflecting. Different academics interpret these cycles differently but they all have the same basic elements. One of the most visually accessible models in my view has been developed by Kemmis in Ebbutt (1985), which has been reproduced in Figure 2:2. What is implicit is that ideas shift over time and that ongoing feedback and recurring reflection leads to revised plans. Any action research project must allow participants to move through several cycles in order to be effective.
4. Positive relationships within the school context where the project occurs. Projects are reported to be most successful when the school climate encourages communication and experimentation and when the managers support the project. The provision of technical support, funding for materials etc. may also necessary.

Kemmis and McTaggart (1992) identify four areas where potential changes might be identified through reflection:

1. Changes in the use of **language** (self and others) and the development of a "more coherent discourse" about the topic being studied.
2. Changes in the **activities** and "emergence of more coherently described and justified educational **practices**" taking account of the constraints and opportunities related to the context in which the topic is being studied.
3. Changes in the **social relationships** amongst those involved and possible changes to the **organisational structure**.

4. Changes in the way the action research group is participating in the process, including their use of language, activities, relationships and place within the organisation

A visual representation of the essential elements and structure of action research is provided in Figure 3.2. The structure has been taken from Oja and Smulyan (1989) and includes the cycles as described by Kemmis (1985) and outlined in Figure 3.4.

The main advantage of an action research approach is that the researcher is not distanced from the people/situations being studied. The fact that the researcher is a fully participating member of the group means that there is every opportunity to accommodate changes which 'inevitably and unavoidably take place in the life history of a research project" (Uzzell in Breakwell et al 2000 p334). This level of involvement may also enable groups to become more effective in a way that they may not have been able to achieve without the rigour that is introduced in a research project. Action research also enables the use of mixed methods of data collection and analysis rather then being restricted to a traditional experimental approach which may not be conducive when there are many variables that cannot all be controlled for.

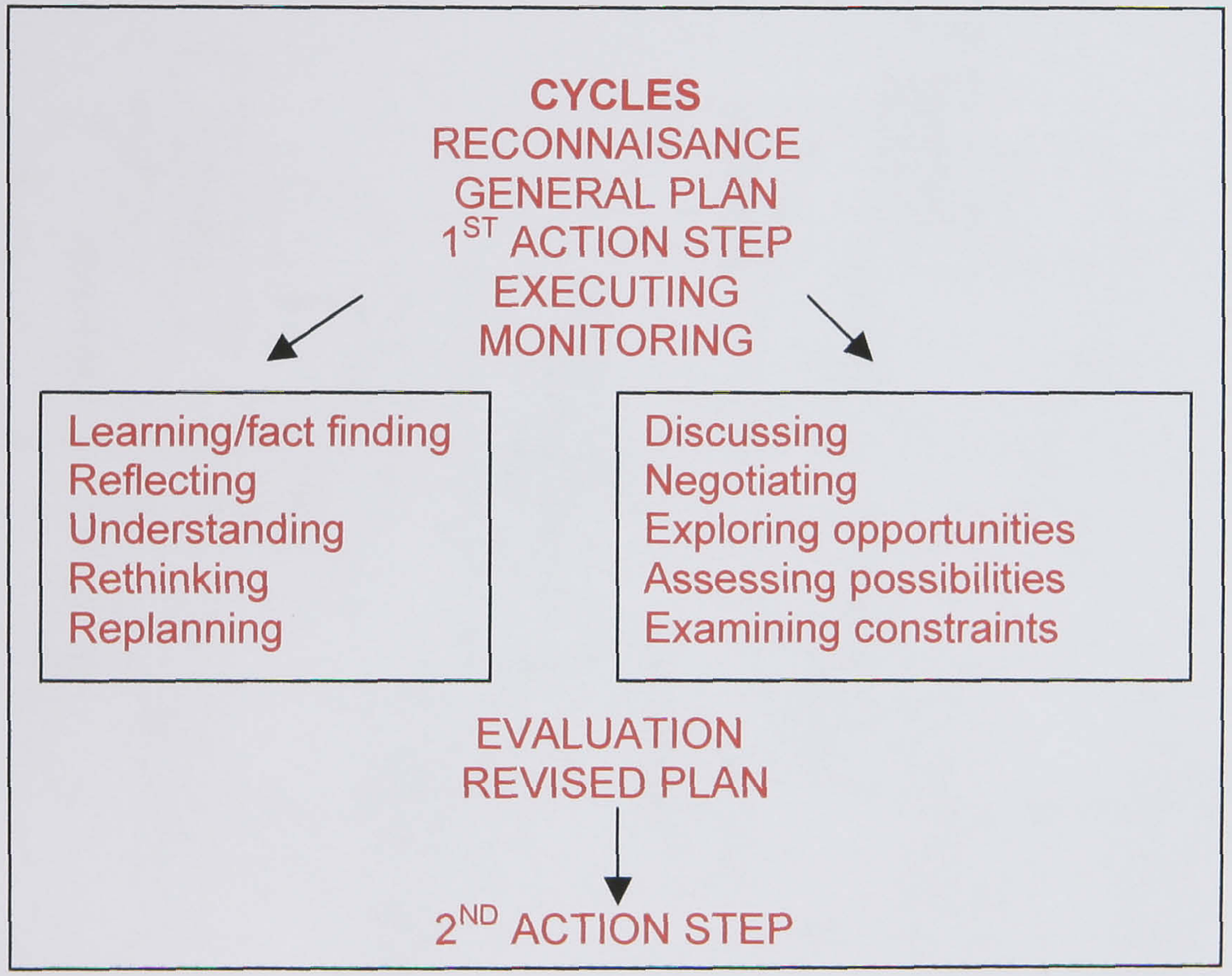
The main disadvantage of this approach is that it is lacking in credibility, to the extent that, some findings have been ignored by other researchers (Hayes 2000). Action research does challenge conventional notions of the detached researcher, studying subjects as opposed to an active researcher, involving participants. This has led some critics to state that action research does not meet the criteria of valid scientific methodology (Hodgkinson 1957). Although this was some time ago there is still an assumption by some that action research is only used to develop teachers' practice rather than adding to educational knowledge or promoting social change.

The fact that the researcher is actively involved has been cited as a concern by critics of action research who argue that the research will be unduly influenced by the researcher not only in relation to the activities that take place but also in terms of the attitudinal or behavioural information that is being collected as part of

the research. Uzzel (2000) suggests that it important to be aware of this and if possible to control for it as one would attempt to control for experimenter effects in more traditional approaches.

ESSENTIAL ELEMENTS IN ACTION RESEARCH

- COMMUNICATIONS - frequent and open, common specific and clear goals, mutual planning
- LEADERSHIP – collaboration (mutual understanding and consensus), sharing power and responsibility



- POSITIVE RELATIONSHIPS – commitment, technical support, funding for materials/resources

FIGURE 3.2 Essential Elements of Action Research

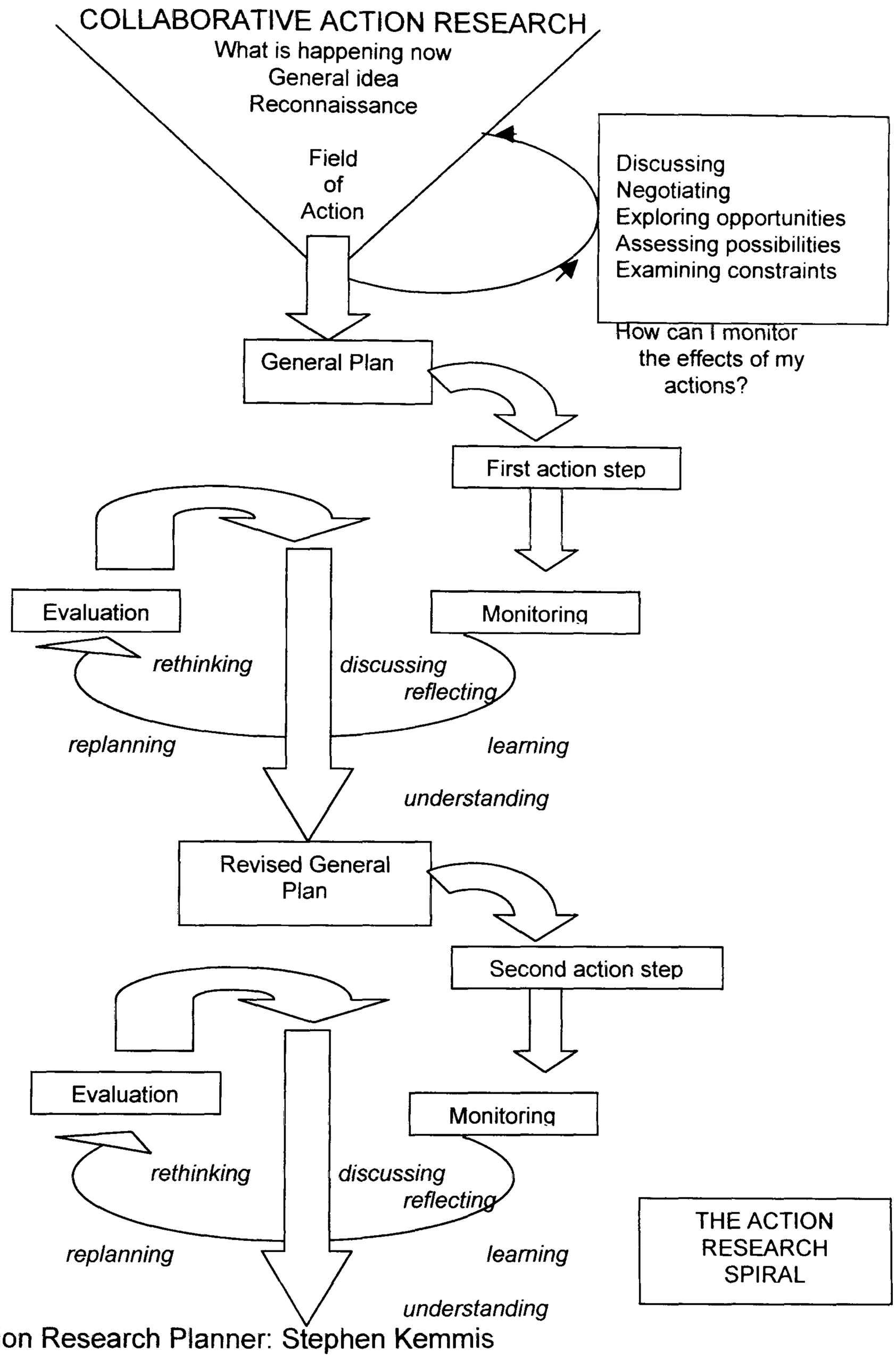


Figure 3.3: Action Research Planner: Stephen Kemmis

Source: Ebbutt, D. (1985) 'Educational action research: some general concerns and specific quibbles,' in Burgess, R., (Ed) Issues in Educational Research: Qualitative Methods, Lewes, Falmer Press, p 163, figure 1.

I. Action Research Process Data Collection

The primary source of evidence to support the analysis of the action research process was the research log, which was kept throughout the project using a format from Self-Organised Learning (Harri-Augstein and Thomas 1985). The research log headings of purpose (what I/we want to do), strategy (how I/we want to go about it), outcome (what I/we plan to achieve) and review (how well did each part work) were intended to provide a structure to help focus both researcher and participants on the processes as well as the actions that needed most attention and provide a means for ongoing reflection as an integral part of the process. A detailed chronology of activities and outcomes developed from the research log was also used as data for reporting on the action research process.

II. Action Research Process Data Analysis

The essential elements of the action research process outlined in Figure 3.2 were used to report on the core activities. However, a single chronology was not sufficient to 'tell the story' of the project and it was necessary to identify the themes that were occurring in the key supporting activities to reflect the fact that there were many challenges and issues to deal with at the same time. The need to do this provides support for McNiff (1988) who noted that the cycles as described by Kemmis only allow the researcher to deal with one problem at a time and "it should offer capacity to deal with a number of problems at the same time by allowing spirals to develop spin off spirals, just as in reality one problem will be symptomatic of many other underlying problems" (McNiff 1988: 44).

Several sub-cycles of activity did occur within a project of this size. These included the identification of budgets for training and equipment; the selection of the pilot sample of pupils; the development and implementation of the training and support programme and the development and administration of the outcome measures.

E. Case Studies

Yin (1994) defines a case study as an empirical inquiry that "investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin 1994:

13). As such a case study can be used when the contextual conditions are known to be an important. Because of the potential complexity involved in conducting a case study it is acknowledged that this methodology "copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis" (Yin 1994: 13). As such it is a comprehensive research strategy. "Case study research design is necessarily flexible and interactive, enabling the sensitive enquirer to capitalise on unexpected eventualities (Robson 2000: 6). "Case studies can penetrate situations in ways that are not always susceptible to numerical analysis … they can establish cause and effect, indeed one of their strengths is that they observe effects in real contexts, recognising that context is a powerful determinant of both causes and effects" (Cohen et al 2000: 181). It's this emphases on context that makes the case study approach suitable for this project because "contexts are unique and dynamic, hence case studies investigate and report the complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance" (Cohen et al 2000: 181). Case studies are noted to be particularly valuable when the researcher has little control over events (Cohen et al: 182) as in action research projects where there is no predefined method of data collection and analysis.

Several authors refer to different types of case studies. For example Yin (1994) refers to exploratory, descriptive and explanatory case studies. Merriam (1988) refers to descriptive, evaluative and interpretive case studies. Sturman (1999) identifies ethnographic, action research, evaluative and educational case studies. Robson (2001) suggests that the main purposes of case studies lie somewhere on a continuum from exploratory to confirmatory. Stake (2000) provides a more detailed explanation of case studies, which can be usefully applied to this project. He refers to intrinsic, instrumental and collective case studies.

Intrinsic case studies are where the researcher wants a better understanding of a particular case. Instrumental studies are where the researcher is looking to gain insight into an issue and/or to "redraw a generalisation". Collective studies are where an instrumental approach is applied to several cases. The choice of cases in collective, instrumental case studies is made to advance the understanding of a particular issue/interest because "it is believed that understanding them will lead to better understanding, perhaps better theorising about a still larger collection of cases" (Stake 2000: 437). The selection of cases should therefore aim for balance and variety where the "opportunity to learn is of prime importance". Stake does note that there is still an element of the intrinsic in most case studies: there is no sharp dividing line between intrinsic and instrumental but more of a continuum between the two. This project can usefully be described as a collective case study where an instrumental approach is used to try and better understand how being introduced to AAC/FCT impacts on individual pupils, the adults who support them and the policy and practices of the organisation (schools and LEA/LA). There is clearly an element of the intrinsic desire to understand what might be happening for each individual pupil by attempting to understand the case in order to understand the intervention and avoid the danger Stake (2000) refers to of the damage that occurs when "commitment to generalise or to theorise runs so strong that the researcher's attention is drawn away from the features important for understanding the case itself" (Stake 2000: 439).

In true social constructionist style Stake (2000) asserts that the case study researcher promotes "naturalistic generalisation" where "the reader of the case study comes to know some things told, as if he or she had experienced it" (Stake 2000: 442). Through repeated encounters the readers is able to modify and reinforce their understanding to the extent that case study researchers "assist readers in the construction of knowledge" (Stake 2000: 442).

It is interesting to note that views on the advantages and disadvantages of case studies vary considerably to the extent that what one author describes as an advantage another may describe as a disadvantage. For example, the unique

nature of case studies is viewed by Nisbet and Watt's (1984) to be an advantage because of the potential to gather data missed by larger scale studies, whereas Searle (1999) asserts the uniqueness of case studies to be a disadvantage due to the improbability of being able to replicate the findings which results in low reliability of the data and an inability to generalise. A common criticism of case studies is the potential bias and subjectivity of the researcher, which should ideally be balanced by the presentation of alternative explanations with the best case studies allowing the reader to judge the implications of the findings for themselves (Searle 1999). If a balanced view is presented then the advantage of case studies in being strong in reality and therefore more widely accessible to a range of audiences can be realised (Stake 2000, Nisbett and Watt (1984), Adelman et al. (1980). It appears that the advantages of flexibility to build on unanticipated events and uncontrolled variables (Nisbett and Watt 1984) needs to be balanced by careful consideration and acknowledgements of the threats to validity and reliability that clearly exist.

The use of multiple/collective case studies reduces the threats to external validity because each case study can be viewed as a replication. Yin (1994) states: "Multiple case studies … should be considered like multiple experiments (or multiple surveys). Under these circumstances, the method of generalisation is "analytical generalisation," in which a previously developed theory is used as a template with which to compare the empirical results of the case study. If two or more cases are shown to support the same theory, replication may be claimed. The results may be considered yet more potent if two or more cases support the same theory but do not support an equally plausible, rival theory" (Yin 1994: 31). The typical criteria for sample size is therefore not relevant due to the use of a multiple case study approach with each case being viewed as a literal and theoretical replication. Although generally a bigger sample of case studies would be required when external conditions are thought to produce wide variations the literature generally talks about bigger sample in terms of five, six or more.

Multiple sources of evidence can also support the validity of case studies (provided that the instruments used can be demonstrated to measure what they

are designed to measure). "However, the most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation ... Thus any finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different sources of information." (Yin 1994: 92) The multiple sources of evidence essentially provide multiple measures of the same phenomenon. Stake (2000) refers to triangulation as "a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation" (Stake 2000: 443)

Reliability is also judged by the potential for the study to be repeated with the same results. This should be supported by what Yin (1994) refers to as a chain of evidence, which should allow an observer to identify where evidence has come from right from the initial research questions to the case study conclusions.

Huberman and Miles (2002) have produced a framework for the process of building theory from case study research, which they describe as "a more nearly complete road map for executing this type of research than has existed in the past" (Huberman and Miles 2002: 6). A summary of their framework has been reproduced in Table 3.4: Process of building theory from case study research. This framework will be used to describe the case study approach used in this study.

I. Evaluation Questions

Step one involves definition of the research questions. These were refined as part of the action research process detailed in the results. The key questions relate to three main areas as follows:

1. Pupil outcomes: Have the pupil's means, reasons and opportunities to communicate and demonstrate their learning changed?
2. Adult outcomes: Have the adults knowledge, experience and use of AAC/FCT changed?
3. Process outcomes: What factors have helped and/or hindered the implementation of the project?

Step	Activity	Reason
1. Getting Started	Definition of research question Possibly a prior constructs Neither theory nor hypothesis	Focuses research efforts Provides better grounding of construct measures Retains theoretical flexibility
2. Selecting Cases	Specified population Theoretical, not random, sampling	Constrains extraneous variation and sharpens external validity Focuses efforts on theoretical useful cases – i.e. those that replicate or extend theory by filling conceptual categories
3. Crafting Instruments and Protocols	Multiple data collection methods Qualitative and quantitative data combined Multiple investigators	Strengthens grounding of theory by triangulation of evidence Synergistic view of evidence Fosters divergent perspectives and strengthens groundings
4. Entering the Field	Overlap data collection and analysis, including field notes Flexible and opportunistic data collection methods	Speeds analysis and reveals helpful adjustments to data collection Allows investigators to take advantage of emergent themes and unique case features
5. Analysing Data	Within-case analysis Cross-case pattern search using divergent techniques	Gains familiarity with data and preliminary theory generation Focuses investigators to look beyond initial impressions and see evidence through multiple lenses
6. Shaping Hypotheses	Iterative tabulation of evidence for each construct Replication, not sampling, logic across cases Search evidence for 'why' behind relationships	Sharpens construct definition, validity, and measurability Confirms, extends and sharpens theory Builds internal validity
7. Enfolding Literature	Comparison with conflicting literature Comparison with similar literature	Builds internal validity, raises theoretical level, and sharpens construct definitions Sharpens generalisability, improves construct definition, and raises theoretical level
8. Reaching Closure	Theoretical saturation when possible	Ends process when marginal improvement becomes small

Table 2:1: Process of Building Theory from Case Study Research. Source: Huberman and Miles (2002: 7)

II. Case Study Sample

Step two involves selecting cases. The selection of a pilot group of pupils was arrived at as part of the action research process detailed in the results. Seven pupils were selected via a survey of pupils with severe communication impairments. The adults included parents and teaching staff as well as head teachers and special educational needs coordinators. It will be seen from the selection process outlined in the results that the sample came from a specified population and were partly chosen to represent a variety of needs but also because their supporters (schools, teaching staff and parents) where willing to be involved in an action research project.

III. Data collection Instruments and Procedures

Steps three and four involve crafting the data collection instruments and arrangements for collecting the data (entering the field). Again the process of how the data collection instruments were developed is described as part of the action research process in the results. The literature on case studies generally identifies six sources of evidence (Yin 1994). These include:

- Documentation
- Archival records
- Interviews/surveys
- Direct observation
- Participant observation
- Physical artefacts

Yin (1994) notes: "no single source has a complete advantage over all the others. In fact, the various sources are highly complementary, and a good case study will therefore want to use as many sources as possible" (Yin 1994: 80). This project has used documentation, interviews/survey, direct observation and participant observation.

a. Documentation

The documentation in relation to pre-intervention data was accessible from educational psychology and special educational needs records and did not require permission to access. The documents included Statements of Educational Need,

Annual Reviews, Mainstream Support Group Bids, Speech and Language Therapist Reports and Pupil Information Forms, School and Parent Reports for AAC/FCT Assessments. A review of this documentation contributed towards the pre-intervention communication profiles for each pupil.

Documentation was also used to contribute towards the communication profiles for each pupil after the introduction of the intervention. These included notes kept by adult participants (e.g. communication logs, facilitator logs); reports/updates from the AAC/FCT trainer and assessor; school reports; reports from support teachers; Annual Reviews; Mainstream Support Group Bids and the research log.

Yin (1994) notes that it is important to recognise that documentary evidence should mainly be used to corroborate and augment other sources due to the fact that it has usually been written for different audiences and purposes. The documentary evidence in this study was used to augment the evidence collected by structured interviews/survey questionnaires and observations.

b. Direct And Participant Observation

Yin (1994) notes that observational evidence is often useful in providing additional information about the topic being studied and distinguishes between formal and informal observations. Observational data can be formal and/or informal. Formal observational data was gathered via video at regular intervals throughout the project:

- FCT pupil assessment videos (June 04)
- Pre-intervention videos (September/October 04)
- Post-training, beginning of intervention videos (Nov/December 04)
- Ongoing intervention videos (February 05, March 05, May05, June 05)

A range of people collected the video data including teaching staff; students; the AAC/FCT trainer and the researcher. It was most often collected in the school setting however for two pupils video data was also collected in the home.

Informal observational data was gathered through visits to schools, training events, phone calls, emails and meetings. This information was recoded as part of the research log and should really be classed as participant observation data.

Yin (1994) notes: "participant observation is a special mode of observation in which you are not merely a passive observer". This data recognises that the researcher may assume a variety of roles, including participating in the events being studied. This can provide some 'unusual opportunities' as well as 'major problems'. The opportunities provided include gaining access and perceiving reality from the viewpoint of someone "inside" the case study rather than external to it. Many would argue that an 'inside' perspective is invaluable in producing an 'accurate' portrayal. Also opportunities arise because the participant observer "may have the ability to manipulate minor events" (p 88) which can produce a greater variety of situations for the purposes of data collection.

Bailey (1978) identifies some advantages of participant observation which include the fact that observation can be superior to experiments and surveys when the data are being collected on non-verbal behaviour; the observer is in a position to notice salient features of behaviour over time; the observer can develop more informal relationships with those they are observing in more natural environments and the potential for bias produced by verbal responses to questionnaires is greatly reduced by direct observation.

Obviously there are significant problems with participant observation in relation to potential biases. Yin (1994) outlines these as follows:

- The investigator has less ability to work externally and may be placed in positions of advocacy which some would argue go against the interests of good scientific practice.
- The investigator is likely to become a supporter of the group being studied.
- The participation role may take too much attention, leaving less attention for the observation role to be fulfilled. This may result in the investigator not having sufficient time to raise questions about events from different perspectives.

Yin (1994) suggests that the trade-offs between the opportunities and problems have to be seriously considered if the credibility of the project is to be maintained.

c. Structured Interviews/Self Report Questionnaires

Three structured interview schedules/survey questionnaires were developed to collect data on pupil, adult and process outcomes. Closed questions were used partly to reduce the pressures of time for data analysis and allow for some element of quantitative analysis but also to reach a greater number of people by providing the option of using the forms as self-report questionnaires. There is usually greater construct validity with closed questions especially when there are several people conducting interviews. Educational psychologists and educational psychologists in training, who had not been active in the project, volunteered to conduct the structured interviews. This was in order to reduce the interview bias that occurs when the researcher has been an active participant in the project.

The development of the interview schedules/survey questionnaires relating to pupil outcomes is outlined in the results section in relation to the action research process. The adult outcome and process interview schedule/questionnaires were developed through consultation with the planning/steering group as part of the action research process. Both the adult outcomes and process outcome measures were mainly developed to be self-completion questionnaires. However, the adults who were being interviewed in relation to the pupil outcomes were given the option of completing them as part of their interview. In addition adult outcome data was also collected using a Likert rating scale of their knowledge, use and attitudes towards AAC/FCT completed pre-training, immediately after the training and six months after the training.

All the interview schedules/questionnaires were piloted and amended. The pupil outcome data was requested from people with daily contact with the pupil at home and school (i.e. teaching staff and parents/carers) through structured interviews with an educational psychologist or trainee educational psychologist not involved in the project. Joint interviews were conducted where there was more than one parent/carer and more than one representative from the teaching staff. Speech and language therapists were also be invited to contribute their views by self-report. This was purposive sampling rather than total sampling as many people who

attended the training event did not have daily contact with the pupils and would not necessarily be in a position to comment in detail on the pupils' means, reasons and opportunities to communicate.

The adult outcomes data was requested from people who attended at least 50 per cent of the training and/or had been directly involved with pupils in the project (total sampling). Participants were asked to complete the self-report questionnaire and/or provide this information as part the interview about pupil outcomes.

The process of implementation data was requested from people who attended at least 50 per cent of the training and/or had been directly involved with pupils in the project. School managers/SENCOs and speech and language therapists were also asked to contribute their views (total sampling). Participants were asked to complete a self-report questionnaire and/or provide this information as part of the interview about pupil outcomes. An overview of the complete sample is provided in Appendix 1.

The majority of this outcome data was collected six months after the initial training had finished when adult participants had begun to implement what they had learnt.

IV. Data Analysis of Case Studies

Step five involves data analysis which, in relation to case studies, should live up to the goals of treating the evidence fairly, producing compelling analytic conclusions and ruling out alternative interpretations (Yin 1994). Yin (1994) identifies the underlying principles of data analysis in case studies as considering all the evidence available, recognising and discussing rival interpretations and concentrating on the most significant aspects of the phenomenon being studied - the largest issue.

Essentially analysis of the pupil, adult and process outcomes was conducted for each case then patterns were compared across cases.

a. Within Case Analysis

The pupil outcome data from the multiple sources of evidence detailed earlier were compiled into two communication profiles for each pupil. One communication profile was a compilation of the pre-intervention data. The other was a compilation

of data gathered after the introduction of the intervention. The two communication profiles were then compared and used to present the evidence of changes that might have occurred. The traditional narrative form of reporting case studies was not used; instead the information from the communication profiles was composed into a series of questions and answers:

- What were the changes in the pupil's means, reasons and opportunities to communicate before and after the intervention?
- What were the adult's perceptions of why these changes occurred?
- How had AAC/FCT been used to support the pupil's access to communication aids and opportunities to demonstrate learning?

A similar method was used to analyse the adult and process outcome data from the questionnaires. The key questions were:

- What changes had occurred in adult's knowledge, practice and attitudes towards AAC and FCT?
- What factors were perceived to have helped and/or hindered the introduction and implementation of the project?

This question and answer style of presenting and reporting the raw data was chosen because of the potential advantages in being able to make cross case comparisons. As Yin (1994) states "if this question-and-answer format has been used for multiple case studies, the advantages are potentially enormous: A reader need only examine the answers to the same question or questions within each case study to begin to make cross-case comparisons. Because each reader may be interested in different questions, the entire format facilitates the development of a cross-case analysis tailored to the specific interests of its readers" (Yin 1994: 135)

b. Across Case Analysis

In order to provide a summary of the changes that had been identified for each pupil; adults' perceived reasons for changes in the pupil; adult outcomes and process outcomes, an analysis across all the cases was conducted.

An additional piece of evidence was also made available by the involvement of a 3rd year psychology student who studied the on/off task behaviour of two

pupils. This student used frame-by-frame video evidence to code pupil responses under the supervision of Andy Grayson at Nottingham Trent University.

Steps 6, 7 and 8 of Miles and Huberman's process for building theory from case study research involve shaping hypotheses, comparing them with the literature and reaching closure, which will form part of the discussion.

F. ETHICAL CONSIDERATIONS

The British Psychological Society guidance on ethics was used to consider the implications for this study.

Informed consent was not an issue in this study because the very nature of it stipulates that the participants want to be involved. A concern that teaching staff might be instructed to attend the training by school managers was not an issue. Parents provided the consent for their child to be part of the project.

Deception in terms of withholding information and debriefing in terms of informing participants; providing information about the findings and asking about their experience of being part of the research project has also not been an issue due to the nature action research.

The option of withdrawing from the project was made explicit from the start and follow up visits to talk with staff and parents provided opportunities to discuss this where necessary. At one point it was considered whether one pupil should be withdrawn from the project, however following ongoing discussions with teaching staff and parents it was felt that this would not be in the pupil's best interests.

It was made explicit that confidentiality, especially in terms of local feedback and reporting could not be maintained. All participants were informed that all names would be removed with young people being referred to by a letter (e.g. pupil a); adults by their role and a number (e.g. teacher 1) and schools by a capital letter (e.g. school A). It was also made clear that video data would only be used with the permission of parents and teaching staff involved. Whilst this permission has not actively been sought one parent has given permission for a compilation video to be used in reporting and training events.

Protection from harm particularly the potential threats to psychological well being was a cause for concern in this study. The risk of harm should be no greater

than in ordinary life which one could argue is the case here however it was important to be sensitive to the emotional responses caused by this intervention. The very idea that a pupil's communication could be significantly enhanced by this intervention did raise the hopes of parents in particular. This was made explicit when informing parents and even more so during the training when it was openly acknowledged that FCT in particular continues to be controversial and that everyone involved would be likely to experience some emotional reactions. This did happen, especially for some teaching staff whose assumptions about pupils potential were challenged to the extent that they questioned their previous practice.

Honesty and integrity were vital in making all participants aware of the emotional impact of being part of the project. The establishment of a support network with half-termly meetings ensured there was a forum for maximising group support and enabling participants to express and manage their own personal reactions. Additionally adherence to the FCT Practice Standards (UK) enhanced the protection of all participants (Stanton and Crossley 2004).

Threats to the well being of the pupils was minimised by the high level of training and follow up support given to teaching staff and parents.

The guidelines stipulate that participants should be informed of procedures for contacting the researcher should stress, potential harm, or related questions or concerns arise and the researcher has responsibility for detecting and removing and/or correcting the consequences. The role of participant observer supported the researcher in being able to address the needs of participants as they arose.

The fact that observational research should not be conducted in situations where those observed would not expect to be observed by strangers was not an issue as children in classrooms, teachers and teaching assistants are used to being observed as part of common practice.

4. RESULTS

A. Action Research Process

To what extent did the action research process support the exploration of introducing FCT within the local authority in order to enhance the communication of young people who have been identified as not having had access to the means of reaching their communication potential?

The main source of data for the evidence presented below comes from the research log, which was the researchers' planning and recording document of purposes, activities, outcomes and reviews.

A summary of the research log led to the production of a detailed chronology of activities, purposes and outcomes. However this is too long and detailed to be included in full so a summary of the activities and purposes can be found in Appendix 2. Extracts from the research log and detailed chronology are used to provide evidence from the raw data.

The activities that were undertaken fall into four main themes.

- Core group activities
- Building positive relationships and commitment including networking and negotiating budgets and resources
- Developing and implementing sampling and data collection tools
- Developing and implementing a programme of training and support

The core group activities were central to the development and implementation of the project. The other themes reflect the nature of the key supporting activities that enabled the action plans generated by the core group to be implemented.
A timeline of the core group activities and some of the key supporting activities is provided in Table 4.1 in order to give an overview of the project. The activities are colour coded to demonstrate how they relate to the main themes.

The main cycles of activity (indicated by the brackets in Table 4.1), central to the development of the project, took place at the core group meetings. This was the forum for reporting back on key supporting activities (sub-cycles of planning, acting, observing and reflecting) to enable reflection and revised planning. The functioning of this core group will be considered in order to present evidence of the

essential elements of the action research process as outlined in Figure 3.2 (positive relationships and commitment; communication; democratic leadership and cycles of activity) supporting the exploration of the main research question. This will be followed by a chronological review of some of the sub-cycles of activities.

	CORE GROUP ACTIVITIES	MONTH	KEY SUPPORTING ACTIVITIES
1	1st Meeting 1st Action Plan	JANUARY 2004	Network with AAC/FCT trainer
	2nd Meeting	FEBRUARY	Network with Speech and Language Therapist Negotiate budget for training
	3rd Meeting 2nd Action Plan	MARCH	Develop sampling tool (survey) Network and local FCT user and facilitator
		APRIL	Distribute survey Network with local FCT researcher
2	4th Meeting	MAY	Develop criteria for selection of pilot group of pupils
		JUNE	Introduce project proposal to school managers followed by teaching staff and parents Conduct AAC/FCT assessments of pupils in potential pilot group
	5th Meeting 3rd Action Plan	JULY	
		AUGUST	Network with local speech and language therapists Negotiate content of training
3	6th Meeting 4th Action Plan	SEPTEMBER	Network with local lecturer and psychology student Video in schools (1st observation) Deliver 6 day training programme
		OCTOBER	
4	7th Meeting 5th Action Plan	NOVEMBER	Visits to schools by trainer Develop pupil outcome measure Video in schools (2nd observation)
		DECEMBER	Negotiate budget for support from FCT trainer and resources
		JANUARY 2005	1st Communication for All Network Deliver training in school C
	8th Meeting	FEBRUARY	1st pilot of pupil, adult and process outcome measures Video in schools (3rd observation) Visits to schools by trainer
		MARCH	2nd Communication for All Network Negotiate budget for next financial year 1st Communication Aids Project Assessment (pupil b)
5		APRIL	Video pupil b as part of assessment (4th observation) Network with speech therapist (ACE Oxford/Scope) Negotiate budget for specialist equipment (pupil b)
		MAY	2nd pilot of outcome measures Produce evaluation pack of outcome measures Video in schools (5th observation) Visits to school by trainer 3rd Communication for All Network 2nd Communication Aids Project Assessment (pupil a)
	9th Meeting 6th Action Plan	JUNE	3rd Communication Aids Project Assessment (pupil d) Video in schools (6th observation) Interviews and questionnaires completed
		JULY	Visits to school by trainer 3rd Communication for All Network
		AUGUST	Analysis of data, summative and formative evaluation report

TABLE 4.1: Timeline of key activities in action research process

Green = Networking Red = Negotiating Resources Blue = Developing and Implementing Sampling and Data Collection Tools Violet = Training and Support Brackets = Cycles of Activity

I. Positive Relationships and Commitment

To what extent was there evidence of commitment from the members of the core group including the provision of funding for resources?

One of the first steps in this project was to gain the commitment needed from service managers in education in relation to their support, time, and willingness to experiment and the provision of budgets for training and resources. An initial meeting (1st core group meeting) led to the establishment of a core group, which consisted of the researcher, the service manager for special educational needs, the service manager for educational psychology and the team managers for inclusive education support and the communication and interaction team.

The initial commitment to support a pilot project was questioned when only one person arrived for the second meeting:

> *"Only one person arrived for the meeting, therefore postponed. Need to increase email and phone follow ups to ensure engagement of stakeholders?"* (Detailed Chronology Log 02.02.04)

However, there was a high level of engagement at the third meeting. The membership of the group had extended to include a speech and language therapist. A budget had been identified to deliver the accredited Bolton AAC/FCT Course. This third core group meeting resulted in sub-cycles of activity to negotiate budgets and develop tools to identify a pilot sample of pupils.

The membership of this group continued to extend as the project developed with a parent, two teachers and an FCT researcher becoming actively involved in the core group activities and decisions after the delivery of the training course.

II. Communication

To what extent was communication frequent and open? Were clear and specific goals established?

The core group met 9 times over a period of 19 months. It can be seen from the timing of these meetings (Table 4.1) that they were most frequent at the beginning of the project, which assisted the setting up and the initial stages of implementation when most of the key decisions had to be made.

The process of arriving at clear and specific goals began at the first meeting when the 'aspirations' of group member were recorded as follows:

"*Aspirations included progressions of the signs and symbols project; building on an individual pupil's success; linking with LEA objectives and embedding in school practice (including special schools as centres of excellence); training LEA support staff in being able to support FCT users and facilitators; exploring options for children in special schools who have severe communication impairment*".

(Research Log 6.1.04)

At the third meeting the 'goals' of the project refined:

- *To explore ways of how to introduce FCT within the local authority in order to:*
    - *Enhance the communication of young people who have been identified as not having had access to the means of reaching their communication potential*
- *To identify ways of ensuring sustainability (e.g. who and how to involve others in the project to sustain practice)*
- *To monitor the process of how FCT is introduced (identify factors that help and hinder)*
- *To evaluate outcomes for young people, teaching staff, parents and LA*

(Research Log 11.03.04)

III. Democratic Leadership

To what extent was there evidence of collaboration in terms of developing mutual understanding and consensus and a sharing of power and responsibility?

Initially it had been the intention to nominate a service manager to take responsibility for the management and leadership of the project and the core group. However, it was made clear by the third meeting that the group members wanted the researcher to take on the lead role. It was agreed that the researcher role should focus on "facilitating collaboration, empowering others and ensuring rigour in the action research process and evaluation of pupil outcomes, adult outcomes and process outcomes" (Detailed Chronology 22.04.04).

The core group meetings were structured to reflect the action research process and participants were regularly reminded of the process (e.g. when new people joined the group and/or when there was some debate about changes in plans).

One example of developing mutual understanding and consensus and sharing of power and responsibility is provided in the extract from the researcher's log of the fourth core group meeting discussions about the selection of the pilot group of pupils. This is presented later in relation to the sub-cycle of activities involved with sampling.

IV. Core Cycles of Planning, Acting, Observing and Reflecting

To what extent was there evidence of participants moving through cycles of planning, acting, observing and reflecting?

It is possible to identify 5 cycles in the core group activities. These are represented in Table 4.1 by the brackets and numbers. The first cycle presents evidence of how the whole project structure was reviewed and revised at the third core group meeting. The initial plan had been to select a group of 6 pupils:

> *"2 pupils from mainstream, 2 pupils from one special school, 2 pupils from another special school, 2 teaching assistants and one teacher from each school to attend module 1 training (Bolton accredited course) to be delivered by FCT trainer".*
>
> (Detailed Chronology Log 28.01.04)

In the revised plan it was:

> *"Agreed to take a step back in the process discussed at the first meeting and begin with a scoping/survey/mapping exercise to establish the range and numbers of young people with restricted communication".*
>
> (Research Log 11.03.04)

It was noted at this third meeting that the action research process allowed for such changes in plans and that this was an essential element of the process. This third meeting therefore established the main plan for the project as a whole and 'set the tone' for the action research process.

An overview of the action research model (Ebbutt 1985) reproduced in Figure 3.3 was introduced to the participants of the core group at the fourth meeting and one participant noted:

> *"This model is helpful not just for this project as people often get locked into the idea that if you change your original plans you have got something wrong rather than planning being a developmental process".*
> (Research Log 26.05.04)

Subsequent meetings led to changes in the plan in relation to finalising the pilot group of pupil, amending the training course to reflect local procedures and practice, identifying key questions to be addressed in the evaluation, agreeing evaluation tools and procedures for data collection; amending timelines for data collection and analysis; identifying budgets for the training and support programme and equipment and future plans for the continuation. Most of these changes in plans were related to aspects of the project rather than the whole project structure.

V. Chronology of Sub-Cycles of Activity

It is beyond the scope of this study to detail every sub-cycle of activity. Some of the key supporting activities identified in Table 4.1 will be briefly reviewed to present the evidence of how the action research process supported the exploration of how FCT could be introduced within the local authority.

a. Identifying a Sample Group of Pupils

A survey of communication strategies being used by pupils with severe communication impairment was developed in collaboration with the speech and language therapist who was part of the core group. Log entries 10, 14, 15 and 16 (Appendix 2) provide evidence of the activities that occurred to develop and implement this survey. The survey was sent to speech and language therapists, educational psychologists and teaching staff in the inclusive education support service. A summary of the analysis of the returns is provided in Appendix 3. A potential short-list of 16 pupils was taken to the fourth core group meeting with the purpose of reaching agreement on selection of pupils to be part of the pilot project. The criteria used to include and/or exclude pupils from the pilot group were

developed in the first instance by the researcher and speech and language therapist and added to by the core group (Appendix 4).

There were tensions involved in the process of selecting the pilot group of pupils. The following extract from the research log provides evidence of the process involved in reaching consensus:

> *"Acknowledged tensions present in the discussion about selecting pupils to be in pilot group in relation to different perspectives held by different agencies: different professionals view children's needs and potential in different ways. Discussion considered additional factors including family, school, level of support, transfer, etc.*
>
> *Necessary to challenge speech therapists choice of pupils for the project and question the knowledge base they were using and the assumptions that were being made about pupils' potential. Support from colleagues helped and also knowledge gained from having read so widely on the subject. This supported the questioning of whether speech therapists were aware of the potential benefits for pupils on the autistic spectrum from this intervention.*
>
> *Concerns about ownership – needing to reframe some people's language from "I" to "we" to emphasise this is a collaborative project with shared ownership – this should become more evident when we begin working with school staff and parents – trying to lead by example e.g. requesting support from other agencies when meeting with school staff, agreeing baseline data etc."*

(Research Log 26.05.05)

A provisional group of 8 pupils were selected by the core group. The next step involved introducing the project to school managers, teaching staff and parents. Semi-structured interview were conducted with school managers to establish whether they would be able/willing to be involved in the project. Appendix 5 details the outcome of these interviews.

The head teacher of school A agreed for the one pupil and four teaching staff to be included in the project. The SENCo of school B agreed for two pupils and two to three staff to be included. The head teacher of school C agreed to take part in the

project but expressed reservations about the selection of pupils. The teaching staff from school C also expressed reservations about the selection of pupils, which had been based on survey returns by the speech and language therapist. This resulted in negotiations between the speech and language therapist and teaching staff to reach consensus regarding the inclusion of six pupils in the project. The number of pupils included in the project from this school was increased due to the increased capacity from school D choosing not to take part in the project.

The head teacher of school D decided that two pupils and their teaching staff would not be able to take part in the project due to staff changes and concerns that the school would not have the capacity to be actively involved in the project.

The responses from school managers led to a revised pilot group of pupils being agreed by the core group. These consisted eight pupils: one pupil from school A, two pupils from school B and five pupils from school C.

The next step involved the AAC/FCT trainer in assessing these pupils potential to benefit from being included in the project. All but one of the pupils' assessments indicated that they had the potential to benefit from this intervention. The pupil assessed as not being able to benefit from the intervention was from school C.

This process eventually reached some consensus about which pupils and schools would be involved in the project. Fortunately all of the parents agreed for this group of pupils to be involved.

Negotiations about the number of staff able to be released to attend the training were then paramount. Despite school managers being made aware of the lack of funding to cover staff release time to attend the training one school manager considered withdrawing from the project. The issues of funding are considered in the next section.

b. Identifying Budgets for Training

Initially the budget proposal for training programme had included funding for supply cover. However, despite funding the costs of the trainer, venue and refreshments, the LEA did not fund staff release time. This led to a revised plan, which meant that school managers had to commit to supporting staff release from within their own resources. Despite this being made explicit when the project was

introduced to school managers, there was some concern that one school would withdraw from the project after considering the costs of releasing staff:

> *Head teacher reported to be reconsidering involvement in the project due to cost of releasing staff. The researcher is to contact head teacher to clarify concerns and agree ways forward.*
>
> (Detailed Chronology Log 21.07.04)

As a result of negotiating with the head teacher it was agreed to reduce the number of staff who would attend the training. The initial expectation of one teacher and teaching assistant from each class with a pilot pupil (three teachers and three teaching assistants) was reduced to one teacher or teaching assistant from each class (3 teaching staff).

There were further discussions (red entries in Appendix 2) to secure funding for visits to schools from the AAC/FCT trainer. The service manager (SEN) was instrumental in making sure there was funding to cover one to two visit per term to each school.

c. Negotiating Training and Support Programme

The only accredited facilitated communication training programme available within the UK was developed by Marion Stanton in consultation with Rosemary Crossley. Bolton Institute of Education (now Bolton University) had accredited the course as part of a modular option towards a bachelor of arts qualification. This course had traditionally taken place at the Bolton Institute of Education as evening workshop sessions over several weeks. It was continually being adapted and delivered by Communication and Learning Enterprises (CanDLE 2004). The core group had agreed to fund the delivery of this accredited course as part of the training and support programme.

The speech and language therapists expressed concerns that the training should reflect local policies and procedures. They were concerned that the recent development in relation to using signs and symbols should be incorporated into the training programme. This resulted in the researcher negotiating the content of the training programme with the AAC/FCT trainer and also contributing towards the

delivery of the training. Appendix 6 provides an overview of the training programme.

The follow up support programme was negotiated with each school so that follow up visits by the AAC/FCT trainer and researcher were tailored to the needs of the pupils and the adults supporting them. Activities included one to one work with pupils in school and/or at home; input to staff meetings; observations of pupils, teaching staff and parents and sharing of information through use of video data. Teaching staff, support teachers, speech and language therapists and parents were invited to take part in these sessions.

The teaching staff from school A and the support teacher and parents/carers for pupil a accessed the support programme and were actively involved throughout the project. The teaching staff from school B accessed training and support and the parent of pupil b was actively involved throughout. The staff from school C accessed the training and support programme and the parents of pupils' d and g attended the training and some of the follow up support sessions. The speech and language therapist for pupils' b and c did not attend any of the initial training sessions but did attend one of the follow up training sessions in school. The speech and language therapist for pupils' d, f and g attended some of the initial training sessions, some staff meetings and CAP assessments of pupils. The speech and language therapist for pupil a attended some of the initial training sessions.

d. Negotiating Budgets for Equipment

The initial plan was that access to equipment would be covered by the LEA high cost equipment budget and via loans from local contacts (CAP group). This plan was revised when the high cost equipment budget had been allocated and the equipment needed was not available on loan locally. The AAC/FCT trainer, who was also a registered CAP assessor for pupils being support by FCT to access communication aids, negotiated with the ACE Centres for equipment to be loaned from them. For example, light writers were borrowed for two pupils in the project for short periods of time (6-8 weeks). However, in the longer term it was necessary to demonstrate these pupils would benefit from having their own equipment so they

were registered for CAP assessments by the AAC/FCT trainer. To date, one of these assessments has been successful in gaining one pupil a light writer and a touch screen tablet computer. (Log entries 59, 63, 65 and 66 Appendix 2) provide evidence of the negotiations the AAC/FCT trainer and researcher engaged in to get agreement for the LEA to fund the touch screen computer, CAP to fund the light writer and the school and parent to accept responsibility for covering the insurance costs for both pieces of equipment.

e. Negotiating Evaluation Methods and Procedures

An overview of nineteen possible research questions was produced by the researcher and discussed at 6th core group meeting. The core group wanted to focus on whether there had been any changes in the pupil's intentional communication:

> *Is there an increase in the frequency of intentional communication? The number of opportunities given and the number of opportunities used/not used could be measured for each child using video and independent coders. It may be possible to measure with some reliability.*
>
> (Research Log 08.09.05)

A data collection proposal based on analysing video data was circulated to core group members and training participants for comment. However, feedback from parents and academics led to this proposal being dismissed on the basis that it would be difficult to tell if communication was intentional and/or unintentional. A revised plan was developed at the 7th core group meeting:

> *It was agreed at the last meeting the researcher should develop a tool for measuring intentional communication however the feedback from the university and participants of the training event is that this is not possible to measure reliably. The researcher's video recordings of pupils engaging in activities without facilitation or increased communication opportunities may be useful examples of how the pupils respond but it was very difficult to see how they could be analysed to look at intentional communication. So the question was revised: "in what way does the pupil's way of demonstrating communication change?"*

Discussed using the facilitators – very difficult to measure communication/demonstration of learning as there is no linear sequence. Ideally return to using the local means, reasons and opportunities model to develop some way of measuring changes in communication. It will be important to ask adults involved in supporting the pupils about changes they may have noticed. Some people will have kept communication logs and this will be another source of information. Researcher and speech and language therapist to meet and draw up ideas for measuring communication change. (Research Log 11.11.04)

The speech and language therapist and researcher developed a pro forma to measure pupils means, reasons and opportunities to communicate and demonstrate learning which resulted in the development of the final pupil outcome structured interview schedule (Appendix 7).

The researcher developed the draft tools for measuring adult and process outcomes based on feedback from the training and support programme. These measures were piloted and amended at the 8th core group meeting. There was considerable interest in why the training had been received so positively and why there were apparently positive changes in adults' practice that had not been achieved through the conventional training and support programme:

Interview/questionnaires to measure changes in adult practices in relation to communication were discussed and amended. It was felt to be important to get the views of people who attended the training and/or have been directly (hands on) involved in supporting pilot group of pupils.

Interview/questionnaires to gain views about the process of the project i.e. what factors helped and/or hindered were discussed and amended. It was felt to be important to get the views of the whole range of people who have been directly and indirectly involved, including speech and language therapists and school managers.

If changes in practice have occurred it is important to ask the question why? The speech and language therapist is interested in why the training appeared to promote change for people to use what others may

have recommended in the past. The parent representative commented that she felt it was about the way the training was delivered, the whole package that made the difference e.g. learning new skills together (not the expert approach), seeing videos of how others have been supported, meeting communication aid users and experienced facilitators, modelling how to support a range of needs etc. This discussion led to the inclusion of a range of questions about the training provided.

(Researcher Log 10.02.05)

The final evaluation pack included:

- An introductory letter to the interviewers
- An introductory letter to the participants
- Pupil outcome forms (means, reasons and opportunities to communicate and demonstrate learning) which were used to conduct structured interviews
- Adult outcomes questionnaires (perceived changes in knowledge, practice and attitudes) which were completed as part of the interview or by self-report
- Process of implementation questionnaires (factors which helped and/or hindered the introduction and implementation of the project, vies on future provision and practice) which were completed as part of the interview or by self-report

All of the measures included general guidance on why the information was being gathered, how it would be used, confidentiality and instructions on how to complete the forms. (The pupil outcome forms have been included in Appendix 7 the other forms have not been included because the questions have been reproduced in Appendices 8 and 9 as part of the data analysis)

f. Building Positive Relationships

All of the green key supporting activities in Table 4.1 and the green log entries in Appendix 2 are evidence of activities to develop positive relationships through networking and consultation with a range of individuals and groups of people including:

- LEA managers
- School managers, teaching staff and parents
- Speech and Language Therapists
- Local, national and international people/groups involved with AAC/FCT (Appendix 10)

The commitment of LEA managers has been discussed above and the commitment of school managers is referred to in the relation to the sampling process. The commitment of speech and language therapists is evidenced by their involvement in the core group and the development of sampling and data collection tools. Additionally an example from the detailed chronology provides evidence of additional activities aimed at maintaining positive relationships with speech and language therapists.

> *Meeting lasted 3 hours, appeared to gain support for project and reduce fears/scepticism. SALTs agreed to support with school staff, drop into training sessions when possible, amend assessment reports where necessary and make a direct link with FCT trainer regarding equipment and possible access to the local loan library. Concerns were expressed about the AAC/FCT assessment videos in relation to guiding of pupils and use of language and materials that appeared beyond the pupils' abilities. I used the term 'mediated learning' to explain FCT and this seemed to help take the focus off communication which SALTs appear to describe differently to educationalist.*
>
> (Detailed Chronology 24.08.05)

The building of relationships and commitment of local, national and international people and groups/organisations involved with AAC/FCT covered a broad range of people including:

- The AAC/FCT trainer (who developed the accredited course at Bolton University in consultation with Rosemary Crossley)
- A local FCT user who had been supported to attend a local mainstream comprehensive school, achieved 5 GCSEs and is studying English at Nottingham Trent University – her facilitators were also involved

- A local researcher from Nottingham Trent University (who had been studying FCT for 10 years with funding from the US)
- A senior lecturer at Bolton University (who had been supporting FCT users and facilitators for many years)
- A speech and language therapist from ACE Oxford/Scope (who supported FCT CAP assessments and included information and advice on FCT as part of the AAC information produced by Scope)
- Professor (recently appointed dean) Douglas Biklen from Syracuse University.

The activities evidenced in Appendix 2 included:

- Negotiating content and delivery of training and support with the AAC/FCT trainer
- Involving the local FCT user and her facilitators in the delivery of training and support
- Involving the local researcher in the core group and support networks and supporting a 3rd year psychology student to contribute towards the evaluation of the project
- Linking with the senior lecturer at Bolton University for advice on developing a communication and inclusion research facility
- Exchanging information and ideas with the speech and language therapist from ACE Oxford/Scope
- Exchanging ideas and information with Douglas Biklen and attending the film premier of 'Autism is a World' that he co-produced and tells the story of Sue Rubin who is an adult with autism who used to be an FCT user and now types independently.

B. CASE STUDY RESULTS

I. Introduction

Of the seven pupils who were part of this pilot project, data was available about six of the pupils. The teaching staff and parents for pupil e were not able to attend the interviews or return the questionnaires in relation to the pupil's outcomes and despite having video information there was not sufficient data to provide reliable reporting.

Each individual case study is presented in a question and answer format to address the key questions identified by the core group. The data has been collated from the multiple sources of evidence outlined in the methodology. The numbers in superscript provide a reference to the sources of the data and give an indication of the range and number of sources that support each statement.

The pupils' means, reasons and opportunities to communicate and demonstrate learning are presented in tables and/or text to report on the data from before and after the introduction of the project/intervention. This format has been used to enable the reader to make comparisons. However it should be noted that there are generally more examples provided after the implementation of the intervention due to the increased range and number of data sources available. It is not the number of examples that are important; rather, it is the amount of agreement from different sources to support the evidence that should be considered when reviewing the results as they are presented. It should also be noted that it did not appear helpful to separate examples of the pupils' means and reasons to communicate (due to duplication of reporting), so the examples of the pupils' reasons to communicate are presented in the first table for each pupil and the evidence of the pupils' perceived reasons to communicate and demonstrate learning is presented in the second table for each pupil.

More detailed examples are used to illustrate the more specific changes that appear to have occurred for pupils where there appeared to be consistent and significant evidence of changes in the pupil's communication and demonstration of learning. Video data has been supplied for Pupil b to provide the reader with an

additional means of assessing the changes reported for this pupil. Video data could not be included for other cases due to difficulties in gaining permission.

Each case study also presents information about how AAC and/or FCT have been used to support the pupils' access to their communication aids.

Each case study includes a review of the adults reported changes in their knowledge, use and attitudes towards AAC/FCT and what they felt helped and/or hindered the process involved in introducing and implementing the project/intervention. The numerical data for these responses is presented in Appendix 8 and 9. Comments from individuals have also been quoted to expand on the numerical data and present information about the contexts in which the participants were trying to implement what they had learnt. An analysis of self report rating scales of adults knowledge, use and attitudes towards AAC and FCT administered prior to the training, at the end of the training and 6 months after the training is also presented as evidence to be considered in relation to adult outcomes.

The teaching staff involved in supporting pupils b and c were the same so their views have been presented in case study b.

The across case study analysis presents:

- A summary of the outcomes for each pupil in relation to what changes appear to have occurred and the possible/perceived reasons for these changes.
- A summary of the adults' reported changes in relation to their knowledge, use and attitudes towards AAC/FCT and their perceived reasons for any changes in practice. This includes and analysis of self report ratings by adults on their knowledge, use and experience of AAC/FCT which were completed before, immediately after and 6 months after the training had taken place.
- A summary of the factors that were perceived to have helped and/or hindered the introduction and implementation of the project as a whole.
- A summary of the adults' views about the future provision and practice.

II. CASE STUDY: Pupil a, School A

Contextual Information

This pupil was 7 years old in September 2004. He was receiving his education in a mainstream primary school Year 1 class (he was a Year 3 pupil). He had experienced a change in support assistants from one in his previous year to five at the beginning of September. However, by November 2004 he was being supported by two teaching assistant. He has a statement of educational need and the label of autism.

The class teacher, teaching assistants, support teacher and parents attended the training and accessed the ongoing support programme.

What changes have occurred in the pupil's means, reasons and opportunities to communicate?

Means and reasons

Tables 4.2.1, 4.2.2 and 4.2.4 provide examples of this pupil's means and reasons to communicate before and after the introduction of the intervention. There is full agreement from the data collected and all respondents that this pupil has increased his use of spoken words.[4 5 6] He will ask for things he wants more often than he did before and is described as having a wider vocabulary and being more willing to use it.[4 5 6] This has led to a reduction in him taking adults to what he wants.[4 5 6 7]

There has been some increase in him pointing to letters and typing words on the light writer with facilitation, particularly at home.[6 v2] He will type an initial letter to indicate a choice.[8 9 v2]He will type some single words after he has made a verbal choice.[6] He will respond to questions using the light writer. He has typed sentences to explain a choice he has made.[8 9 v2] For example, during a home visit with the AAC/FCT trainer to try and establish whether this pupil would benefit from continuing to stay in the project he engaged more than he had previously with facilitation from the AAC/FCT trainer and his carer. There was some discussion about whether he would benefit from continued use of light writer that was currently on loan from ACE North. His parent and carer said that they were not sure of the voice output setting, which sounded very feminine. The

AAC/FCT trainer took the light writer to the pupil and facilitated him to respond to her questions as follows:

Trainer: Said "do you like the light writer?"

Pupil: Typed "yes".

Trainer: Said, "yes what?"

Pupil: Typed, "I like the sound". [9]

When asked what he liked doing on the computer he typed "really love Telly Tubbies". Towards the end of this session the trainer wanted to find out whether the pupil preferred using the light writer or the touch screen tablet computer to augment his speech so she asked him:

"'L' for light writer, 't' for tablet computer, which do you like best for talking? Tell (carers name) then she will know. What do you want as a back-up to your voice, not instead of it?"

With the carer facilitating him, he went straight to the 'l' for light writer, which his carer found surprising because he would normally go to the 't' because it stands for his favourite activity (Telly Tubbies).

This pupil does not respond consistently well to pointing to Makaton symbols with words or yes/no boards.[4 5 6 7] He is more likely to respond to choices between objects, foods, activities when presented as a choice rather than being asked yes or no.

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	• Laughs to express pleasure[1] • Words for objects (drink[2], jigsaw[2], cloud[v1]), the names of Telly Tubbies (tinky winky)[v1]and computer programmes he wants to use[2] • Words for actions (come on, help me, go away, coat on)[2] • Repeats key words and learnt phrases (shh, bing bong)[v1]including video commentary[12 v1] • Adds final or missing word as adult reads text from reading book[2] • Reads own book about himself[3]	Continues to vocalise using: • Squeals loudly[4 5 6 7] when frustrated,[4] told he can't do something,[5] excited,[5 6] happy, stressed, agitated, upset,[5] screams if really annoyed[6] • Grates teeth loudly, sometimes when cross[4] • Using lots more words[4 5 6] more often, amount of speech can depend on his mood[5] • Names objects (foods, drinks, videos, Telly Tubbies, clouds, birds)[4 5 6 7] usually to get what he wants • Uses action/describing words (run, march, crawl, shower, raining, very good) to comment and make things happen (toilet, outside, light off, bye-bye, you do it)[4 5 6 7] • Has joined in with some songs in music interaction[7] • Makes repetitive sounds [4 5 6 7] (uh oh, tttt)[5] and repeats key words and phrases (tidy up, go to sleep)[4 5 6 7] • Can put several words together to give information (washing line fall down)[3] • Reads simple books out loud[4 6 8]

TABLE 4.2.1: Examples of pupil a's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Facial expression, body movement, gesture and signing	• Smiles in response to being asked are you tricking me?[v1] • Hugs other children and adults[1 2] and lean into/sits on adults when engaged in joint activity[v1] • Walks around the room when distracted[1] • Pulls other children and adults to initiate chaseing[1] • Falls to the floor and will not move[2 9] • Pushes people away[2] and squirms/pulls away from adults when he does not want to do something[v1] • Takes adults by the hand to what he wants[2] • Runs out of class without warning[9] • Kick/hits out at adults or children when they try to take something from him[3] or when he does not want to do something[2] • Claps hands when he likes something[v1]	• Smiles especially when engaging in activities he enjoys (PE, tickling)[4 5 6 7] • Frowns[4 6] or has angry face[5] when not happy • Leans into adults when engaging in joint activity[v2] • Turns his head away when thinking[4] • Puts his hands over his ears when he doesn't want to listen[4] • Goes stiff[4 5 6 7] when resisting[4 6 7] or upset/fearful[6] • Goes floppy when he doesn't want to do something[4 5 6 7] • Pushes people away[4 5 6 7] if in his way,[4] to protect what he is doing or is not ready to finish[6 7] • Takes adults to what he wants (toilet, video)[4 5 6 7] but this is less now due to increased use of words[5] • Runs away[4 5 6 7] if upset or for no particular reason,[4 5] or because he likes the chase[6] • Kick/hits out (frustrated, angry, can't do something, stopped from doing something)[4 5 6 7] • Claps palms/fingers together, shakes hands/fingers [4 5 6 7] • Wraps himself up in the curtains[4] • Jumps on and off things[6]

TABLE 4.2.2: Examples of pupil a's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Eye gaze, giving, pointing (with and without facilitation)	• People when he wants something[1] • Objects (shoes to indicate go home)[1]will point at what he wants and say that one[v1] • Pictures (photo book)[2] and picture books when being read to and on computer[v1] • Makaton symbols with words (food, activities)[1] and will use these to choose[3] or press repeatedly on a voice output device[v1]	• People (looks intently at people working with him)[4 5] • Objects (looks intently at Telly Tubbies, TV, computer), will bring object to people to get what he wants (play dough, computer game)[4 5 6 7] • Pictures on monitor or in books especially Telly Tubbies, dinosaurs, rainbows, Oxford Reading Tree Books)[4 5 6 7] will stab/point at picture[7] will share a picture with you then cut it out[6] • Shows awareness of Makaton symbols with words (foods, drinks, activities) and may choose them for his timetable when in the mood[7] • Points to words on touch screen computer with facilitation [4 5 6 8] [v2](pointed to words to turn the pages of a book loaded into The Grid and pointed to correct words on request from multiple choice grid)[v2] • Points to letters with facilitation to indicate a choice, [8 9] used to press a letter to replay a stored good morning on the light writer then refused[8] • Writes/types words with facilitation (first name, animal names)[4 6 8 9] wrote his name with support to the wrist,[9] has typed 'yes' on the lightwriter[8 9] has typed a choice he has made verbally (computer),[8 9 v2] has typed a sentence to indicate and explain a choice (I like the sound, I like this, really love tellie tubbies)[8 9 v2]

TABLE 4.2.3: Examples of pupil a's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

The evidence of the perceived reasons why this pupil communicates and demonstrates learning are recorded in Table 4.3. There is consistent agreement that this pupil has a wide range of reasons to communicate and that there has been an increase in him expressing his needs; likes and dislikes and responding to questions related to making choices. Whilst he will express agreement (yes)

and disagreement (no) he does this less consistently than responding to questions related to choices.

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes[1 2 v1]	Yes[4 5 6 7]
Asking for help	Yes[1 v1]	Yes[4 5 6 7]
Regulating/directing others	Yes[1 v1]	Yes[4 5 6 7]
Refusing or protesting	Yes[v1]	Yes[4 5 6 7]
Ending an interaction	Yes[1 v1]	Yes[4 5 6 7]
TO EXPRESS THEMSELVES		
Express needs	Yes[1 v1]	Increased[4 5 6 7]
Express likes/dislikes	Yes[v1]	Increased[4 5 6 7]
Express agreement (yes)		Yes[8]
Express disagreement (no)		Yes[6 7]
Express feelings	Yes[1 v1]	Yes[4 5 6 7]
TO COMMENT ON THINGS		
Commenting	Yes[1 v1]	Yes[4 5 6]
Giving information		Yes[5 6]
Responding to questions (choices)	Yes[v1]	Increased[4 5 6 7]
TO GAIN INFORMATION		
Ask questions	Yes[1]	Yes[6]
FOR SOCIAL REASONS		
Greetings and farewells	Yes[1]	Yes[4 5 6 7]
Getting attention		Yes[4 5 6 7]
Initiating starting interaction	Yes[1]	Yes[4 5 6 7]
Apologising		Yes[4 5 6 7]
Joking or teasing	Yes[v1]	Yes[4 5 6]
Chatting		To himself[5 6]

TABLE 4.3: Evidence of Pupil a's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil had access to low tech options including a visual task board/timetable and photograph books.[2] He had access to his own computer in his workstation area of the classroom.[2] There were routine opportunities to communicate throughout the day including choosing the activities for the day and using a register card. He had access to a range of things that interested and motivated him including jigsaw puzzles, computer work, interactive music sessions, Telly Tubbies and physical contact/activities.[2 3]

Following the introduction of the intervention there was initially an increase in the use of low-tech options such as yes/no boards and choice boards.[4 5 6 7] However he did not respond consistently well to these and parents felt that he got bored with them very quickly.[3] He continues to have access to visual choice making in school. He continues to use his own computer in school and has been supported by a tracker ball to reduce his impulsivity to repeatedly press the mouse.[4 5 7 8] He has had access to a light writer on loan which he will use at home with facilitation but has been reluctant to use in school.[4 5 6] Whilst he has had consistent support and good relationships at home he has had to adjust to a range of support staff, which led to an increase in the time taken to establish communication relationships with key people.[6 7 8 9] He continues to have access to routine opportunities to communicate in school.[4 5] At home there had been an increase in his opportunities to communicate through being "given choices all the time now, much more than before".[6] His school work is differentiated to encourage him to learn through using his interests (Telly Tubbies, computer work, physical activities, modelling and plastacine),[4 5 6 7] however there is some concern that he has not had access to an age-appropriate curriculum.[6 7 8]

What are adults' perceptions of why changes in the pupil's communication and demonstration of learning have occurred?

The teaching staff attribute changes to the pupil being "more willing to communicate and ask for things … he is more relaxed".[4] The teaching assistants also feel that their "constant talking to him and commenting on everything he is doing"[4] has supported his increased use of language.

The parent and carer attribute the changes to "an increased awareness of his needs"[6] due to the education they received as part of the project, which in turn, led to them changing their approach. They also commented, "FCT has opened up a network of support" which has also contributed towards changes in everyone's practice.[6]

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

FCT has been used to help this pupil manage his difficulties with perseveration and impulsivity (e.g. repeatedly pressing keys/mouse on the computer, repeating movements that he may not necessarily be in control of) by being provided with physical and emotional support to pull him back from the keyboard/mouse, slow him down and help him to focus. Physical support may also help with his proprioception (awareness of where his body is in space) and his need to for physical contact. Having access to a voice output device will provide opportunities to scaffold his developing use of spoken language and enable him to increase his typed communication.[8 9 v2]

What do adult's report as perceived changes in their knowledge, practice and attitudes changed?

Seven out of nine people took part in structured interviews (5[4 5 6]) or completed self-report questionnaires (2 support teachers). One participant did not return a questionnaire because he was no longer working with the pupil and one parent was unable to attend the interview. The numerical results are detailed in Appendix 8. Of the total responses the majority reported changes in their knowledge, practice and attitudes towards using low-tech options and computer software to develop communication aids and support pupils in communicating and demonstrating their learning. Those who did not report any changes in these areas attributed this to "already knowing about and using" these options (2 support teachers) or not having been able to attend all the training sessions (1 class teacher). The only respondents to report increased use of high tech options were the parents who had used a light writer on loan from a CAP centre for several weeks. The parents were also the only respondents to report that their use of low-tech options had not increased because their son "got bored with them after a couple of weeks".

All seven respondents reported that their knowledge of the physical barriers to communication had increased and all but one (support teacher) reported that their use of strategies to overcome these had increased. All but one

(class teacher) reported that their knowledge of environmental barriers to communication had increased and all but two (class teacher and support teacher) reported that their use of strategies to overcome/alleviate environmental barriers to communication had increased. Those who did not report any changes in these areas attributed this to "not being able to attend the full training programme" (class teacher) and "already doing this" (support teacher).

All but two respondents reported that their attitude towards pupils with severe communication impairment had changed. The two who did not report changes in this area attributed this to "already having positive attitudes towards inclusion". All respondents reported that their understanding of these pupils had increased.

All but two respondents reported that they viewed pupils with severe communication impairment as having more potential than they did previously. The two who reported their views to be the same attributed this to having an "already positive view" of disabled pupils.

All but two respondents reported that they thought low-tech aids provide more options than they did previously. All respondents reported that they viewed high-tech options as offering more options than they did previously.

One respondent did not have any reservations about using the strategies they had learnt about. Of the five who did have reservations, one attributed their concerns to their own confidence (support teacher). All six attributed their concerns to the potential of influencing a person's communication. None were concerned about physical contact. Three (teaching staff) were concerned about the consequences of offering more options and choices to the pupil, which they attributed to a belief that "more choices are good but stressful and demanding for the pupil". Two (parent/carers) were concerned about other people's attitudes toward what they were trying to do and referred to "the miracle cure attitude".

All but one (class teacher) reported changes in their practice. These changes included the following:

- Not assuming lack of intelligence[6]
- Offering him choices[4 6]

- Use of language, running commentary[4]
- Giving physical support and facilitation[4 6]
- More commitment to finding strategies to give all children some form of communication (2 support teachers)
- Application of ideas to other pupils especially low-tech options (support teacher)

The following were reported to have influenced their changes in practice:

- Understanding that functional levels are different and to be realistic about what he can achieve[6]
- The AAC/FCT training[4]
- The AAC/FCT training and realisation that there is more out there to develop practice; thinking on a wider scale; what you see is not what you get; physical presentation of a person does not give you the whole picture (support teacher)
- The AAC/FCT training that included meeting people who use AAC/FCT and who are survivors of the system; always had firm belief in people but good to revisit and gain strength to keep going (support teacher)

What factors helped and/or hindered the introduction and implementation of the project?

Seven out of eleven people took part in structured interviews (5[4 5 6]) or completed self-report questionnaires (2 support teachers). One participant did not return a questionnaire because he was no longer working with the pupil and one parent was unable to attend the interview. There were no returns from the head teacher and the speech and language therapist. The numerical results are presented in Appendix 9.

Most participants did not have strong views about how the project was set up. However the majority commented positively on the provision of funding for the training and support programme (5); the use of an action research model (5) and sharing information with other support services/agencies (6).

Most participants reported positively about the training. The majority were positive about the range and number of people who took part in attending (7) and

delivering the training (6-7). There were several comments relating to the involvement of AAC and FCT users as being "brilliant", "fantastic", "inspirational", "thought provoking" and "helpful to see in practice". Hindering factors included some adults attending parts of the training programme (5); the amount of time the training lasted (3) and the lack of funding for school staff to be released (5). There were several comments made about "not all staff being able to attend all the sessions".[5] Between six and seven participants responded positively to the content and delivery of the training.

The implementation of the ideas and strategies was reported by one support teacher to be hindered by school structures and staffing with "the pupil being make to fit school structures and expectations as opposed to meeting his needs". Also the provision and use of equipment and software was hindered by a lack of knowledge and skills in using computer programmes to develop leaning and communication aids. An additional hindering factor was attributed to the pupil's willingness to engage.

The monitoring and follow up support to pupils and adults was generally viewed as positive with no hindering factors being highlighted. The teaching assistants and parents particularly valued the visits to school/home by the AAC/FCT trainer and the researcher:

"Brilliant, knows where we are coming from, spoken with all the staff, discussed feeling and sorted out strategies".[4]

"Generally very good well thought out support available at any time".[6]

What are adults' views on future provision and practice?

Of the seven people who responded three were not sure about continuing the pupil's involvement in the project[4 5] due to the pupil not responding to using communication aids in school. However, all of them felt that the project should be extended to include other pupils even though some of them were not aware of others who might benefit from AAC/FCT at this time.[4 5]All felt that more adults should be given the opportunity to be trained in AAC and FCT and all but one[5] want to maintain/increase their knowledge and experience of AAC and FCT through, for example, "refresher training".

Sources of data

[1]Speech and language therapist report for statutory assessment May 2004

[2]Support teacher report for statutory assessment May 2004

[3]Mainstream Support Group bid for additional LEA resources 2004

[v1]Video data, event sampling September - October 2004

[4]Interview with two teaching assistants May 2005

[5]Interview with class teacher May 2005

[6]Interview with parents/carers May 2005

[7]Reports from support teacher May 2005

[8]Report/updates from AAC/FCT trainer November 2004 – June 2005

[9]Researcher log October 2004 – June 2005

[v2]Video data, event sampling November 2004 – June 2005

III. CASE STUDY: Pupil b, School B

Contextual Information

This pupil was 12 years old in September 2004. He was receiving his education in a mainstream secondary school with a focus provision for pupils on the autistic spectrum. He had a delayed transfer to his secondary school in September 2004 and was a Year 8 pupil in a Year 7 tutor group. He had previously been educated in a mainstream primary school. He accessed part of his education in the focus provision and attended some mainstream lessons with Year 7 pupils.

His parent and teaching assistants attended the training and some of his other support worker (teachers and teaching assistants) accessed the support programme later on in the project.

What changes have occurred in the pupil's means, reasons and opportunities to communicate?

Means and reasons

Table 4.4.1 and 4.4.2 provide examples of this pupil's means and reasons to communicate before and after the introduction for the intervention. There is full agreement from the data collected and all respondents that this pupil has increased his means to communicate and demonstrate learning through typing with facilitation[4 5 6 7 8 v2]. There is some evidence to support the assertion that his spoken words and phrases are less functional than his typed communication [4 5 6 7 8 v2].

The tables below give some indication of the changes that have been reported in this pupil's means and reasons to communicate and demonstrate learning.

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	• Shouting[2] • Crying[2] • Humming and singing[1 2 v1] • Low muttering (easy to miss what he is saying)[2 v1] • Joins in with familiar songs, memorises many songs[1 2] • Uses learnt phrases to make something happen (time to go home, cheerio[1]) • Repeats teacher's language (six balls, matching, biggest, one hippo[v2]) • Names things to express needs/wants (juice[1] toilet[2]) or feelings (toilet, toilet = feels under pressure)[2] • Asks questions (is that six?) and responds to questions (what number is that?)[v1] • Read words (colours, animals, everyday objects)[1 2], numbers[v1] and simple sentences – will memorise and recite chunks of text[1 2] reads back what he has copy typed[1]	• Shouts, makes loud noises and coughs when distracted or appears unsure of himself[5 6 v2] • Makes repetitive sounds (chatters in his own way[4 5 v2]) • Singing and laughing[6] • Experiments with pitch of words and phrases he likes[4] • Repeats sounds, words, phrases[4 5 6 v2] • Uses words and phrases to name pictures, objects, places (cup, window, moon, duck, owl, guitar[v2] white room, toilet [4 5 6 v2]); express feelings and comments on things (so tired[4], nice time[6], sunny day[6], don't know[v2]); greet people (hiya daddy)[4]; say what he would like to do (swim, skater[4], music now[5], home please[5], time to go now[6]); say what he wants others to do (help me[4], push me[4], open the door[6], cheerio[4], stop now[6]); say what he is intending to type (like, school, hello, dolphin[v2]) and ask questions[7] • Reads familiar text and numbers with and without facilitation[4 7 8 v2] reads back what he has typed[v2]

TABLE 4.4.1: Examples of pupil b's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Facial expression, body movement, gesture and signing	Main means of communication is non-verbal signals[2] • Smiles when gets something right[v1] • Has used a variety of challenging behaviour to make his point about what he does and does not want to happen[2] • Takes off clothes[1 2] • Bang head[1 2 3] • Spit[1 2] • Kick and hit adults[3] • Put headphones on[1]	• Smiles, [4 5] beams when whole school diary says good[4], gives correct response to a question[v2] • Cross face[4] • Mischief face[4] • Pleased with himself face[4 v2] • Stiffens, more tense under pressure[4 5] • Floppy[4 5], non-coperation[4] • Waves with prompt[1] • Pushes items and things away[4 5 v2] • Takes adult to things he wants[4 5] • Fetches objects he wants[5] • Walks/runs away, can dart off very quickly[4 5 6] • Kick/hits out[4 5 6](reduced) • Rocking, flapping if excited[4 5 6], or appears unsure of himself[v2] • Jumps for joy[4] • Turns back to people to refuse/protest, shows people out the door to end interaction[4] • Cross body language[4] • Hugs to greet people, show pleasure[4] • Bangs head, paces when stressed or over tired[4] • Climbs up to high windows[6]
Eye gaze, giving, pointing (with and without facilitation)	• Uses pictures with Makaton symbols and words (PECS cards, photo books, visual timetable)[1 2] [3]Not independent in using PECS cards needs lots of verbal prompting to use[1] • Recognises written words,[1 2 3] finds it difficult to write his name and some numbers: hand has to be guided during some writing activities[3] • Can copy type words produced by adult which he has sequenced[1 2]	• People[4] • Looks at objects he wants[4 5] • Selects pictures he wants to send by email[4] • Selects Makaton signs with words to arrange on visual timetable[4 5 6 8] • Points to words with facilitation[5 8 v2], including written options for activities he might want to do[4] • Selects words[4 8] and sentences from multiple choice options[7 v2] • Copy types without facilitation[1] • Types simple words[5] and sentences with facilitation including emails to family and friends (to respond to questions, to comment and give information about things he has done and ask questions)[4 7 8 v2]. He also uses word prediction[v2]

TABLE 4.4.2 Examples of pupil b's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

The first examples of this pupil's use of typing with facilitation is provided by his responses in the AAC/FCT assessment in June 2004 (this can also be

viewed on CD enclosed - for those able to access this the video is being taken by his teaching assistant in the primary school he is attending at the time):

Trainer directs: type your name

Pupil types his first name

Trainer says: type the opposite of girl

Pupil types: boy

Trainer asks: what is the opposite of high?

Pupil types: low

Trainer asks: what is the opposite of new?

Pupil types: old

Trainer: what is the opposite of cold?

Pupil types: hot

Trainer asks: what is the opposite of down?

Pupil types: up

Trainer shows a picture to the pupil and asks: what is he doing?

Pupil types: sitting gate

Trainer comments: good, you could have typed sitting on the gate. She shows him another picture and asks: what is she doing?

Pupil types: Sweeping up leaves

Trainer praises the pupil and shows another picture asking: what is she doing

Pupil types: Washing

Trainer says: remember the little words that make a good sentence

Pupil types: the car

Trainer says: lets pretend you have made a phone call to the railway station and said can you please tell me …

Pupil types: train times

Pupil goes to the toilet and trainer asks: what are you trying to say?

Pupil types: time for lunch

The pupil appears restless and the trainer says: if you want a break type I want a break, if you want to do some more work type I want to do some more work

Pupil types: I want cusions (lying on the cushions is his recognised time out activity not known to the trainer)

When the pupil returns

Trainer asks: what do you want to do?

Pupil types: type some more

Trainer asks do you want to do more questions or chat?

Pupil types: chat

Trainer asks: what do you want to chat about?

Pupil types: lunch

Trainer asks: what do you want to tell me about lunch?

Pupil types: I need some lunch

Trainer asks: what would you like for lunch?

Pupil types: chips

Trainer asks: do you think you will have chips today

Pupil types: I don't know

Another example of this pupil's response to typing with and without facilitation is provided by his first introduction to the Co-Writer text prediction programme at his home in November 2004. This is also on the CD enclosed (the video was taken in the home by the 3rd year psychology student who was collecting data for her research project). The beginning clips show him being facilitated by his mother to write an email to his father.

Mother asks: where is hello?

Pupil says: hello and types h

Mother prompts him to look for the number for hello in the list of word prediction options that come on the screen saying: it's number?

Pupil: says 2 and types 2

Mother prompts saying: hello da..

Pupil types: da then finds and types the word prediction number for daddy

This process continues until he has typed 'hello daddy I like the dolphin". He smiles with pleasure as the whole sentence is read back. This facilitated typing is then followed by him copy typing independently as his mother sounds out and sometimes point out the letters to him on the keyboard.

The final example on the CD enclosed shows the pupil being asked to try out a range of different communication aids to assess what would support him (the video was taken by one of his teaching assistants in school):

The pictures and text from the book 'Not Now Bernard' had been loaded onto The Grid software programme on a touch screen tablet computer. The pupil touches the appropriate boxes on the screen to get the text to be spoken and go through the pages of the story. He finds the words 'comic' and 'mother' form a multiple choice board of words related to the story. He answers yes/no questions related to the story:

Trainer asks: Was he wise to go into the garden, yes or no?

Pupil touches: No

Trainer asks: Do you think he would be safer staying in doors, yes or no?

Pupil says: Don't know

Trainer says: Have a guess

Pupil touches: Yes

The trainer then moves to using the light writer and asks a much more open-ended question.

Trainer asks: What do you think he should have done instead of going into the garden?

Pupil types: Stayed inside and pleased his mother

Towards the end of the day the trainer completes the CAP assessment in the home setting (the video is taken by the speech and language therapist from ACE Oxford/Scope who was supporting the assessment). The light writer is used for the pupil to respond to very open questions:

Trainer asks: What's your favourite thing today?

Mother asks: What do you like doing?

Pupil says then types: School

At this point his mother thinks he has finished what he wants to say but the trainer is aware that he has not finished:

Trainer says: You want to type something more

Pupil types: in home

Trainer says: School in home, what do you mean? You said school in home and we thought I wonder what he means by that?

Pupil types: I like learning

The level of facilitation used was reduced to holding his sleeve and touching and supporting his wrist. When the trainer was encouraged by the speech therapist to reduce the support the pupil leant heavily into the table and appeared to pivot his arm against the edge of the table as he leant over the light writer.

These examples provide evidence of this pupil's increased means and reasons to communicate. His parent has also reported additional examples, which highlight his growing ability and willingness to communicate his needs and wishes:

Prior to parents evening his mother asked him if he would like her to tell or ask his teachers anything. He typed, "tell my teachers to" and then lay down on the sofa for a long time. When he returned to the keyboard he deleted the "to" and typed, "how I type please" which completed the sentence, "tell my teachers how I type please"[8].

The view of teaching staff is that this pupil has increased his means to communicate through typing[5] despite the fact that they have not been able to support this activity to the extent they had hoped due to a range of issues detailed later. His parent has been more active in facilitating his use of typing to communicate and believes:

"He expresses more choices, more clearly through his use of FCT which has raised his expectations that his views will be sought, heard and taken into account … he is becoming increasingly clear in communicating which option is right for him and when it is actually 'something else' that he had in mind"[4].

She is firm in her belief that he "clearly understands language at a level that is higher than his speech" and he is now able to let her know about "the everyday things" that he wants to engage in[6]. For example when asked on Saturday morning what he would like to do he typed "stay in bed for a long time and listen to music"[8].

The evidence of the perceived reasons why this pupil communicates and demonstrates learning is recorded in Table 4.5. There is consistent agreement that this pupil has a wide range of reasons to communicate and that there has been an increase in him expressing his needs; likes and dislikes and responding to questions related to making choices, commenting and giving information. Although instances of him giving information are reported as rare it would appear that he did not do this at all prior to the intervention.

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes[1]	Yes[4 5 v2]
Asking for help		Yes[4]
Regulating/directing others	Yes[2]	Yes[4 5]
Refusing or protesting	Yes[2]	Yes[4 5]
Ending an interaction		Yes[4 5]
TO EXPRESS THEMSELVES		
Express needs	Yes[1]	Yes[4 5 v2]
Express likes/dislikes	Yes[1]	Yes[4 5 8 v2]
Express agreement (yes)		Yes[4 5 v2]
Express disagreement (no)		Yes[4 5 v2]
Express feelings	Yes[2]	Yes[4 5 8]
TO COMMENT ON THINGS		
Commenting	Yes[v1]	Yes[4 6 8]
Giving information		Rarely[4 9]
Responding to questions and choices	Yes[v1]	Yes[4 7 8 v2]
TO GAIN INFORMATION		
Ask questions	Yes[v1]	Yes[7]
FOR SOCIAL REASONS		
Greetings and farewells		Yes[4 5]
Getting attention		Yes[4 5]
Initiating starting interaction		Yes[4 5]
Apologising		Yes[4 5]
Joking or teasing		Yes[4]
Chatting		To himself[6]

TABLE 4.5 Evidence of Pupil b's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil had access to low-tech options including a visual timetable, PECS cards with pictures and symbols and choice boards for choosing activities[1], He also had photo books with captions recording what he had done[1 2]. He had access to a computer and ICT as this was "how he recorded and participated in learning activities"[1]. He is reported to have had a communication relationship with his teacher and teaching assistant in his primary school[3] and his parent[2]. He had daily access to routines to encourage communication including his visual timetable and opportunities to answer the register (with a physical prompt)[1]. He was noted to enjoy picture story books[1],

physical activities[1 2], using the computer[3] and listening to music[3] . All activities were reported to be differentiated with physical and verbal prompts being used to engage his attention[1]. A calm workspace was provided in the classroom facing away from windows to reduce distrations[3].

Following the introduction of the intervention he has had access to a range of low-tech options including yes/no boards, choice boards and timetable cards which are used to build up his daily visual timetable and offer choices throughout his day at home and school[4 5 8]. His parent has found that using paper and pens to write down a list of options is effective in finding out what he would like to do[8]. He has had access to a range of high-tech communication options and as a result of his CAP assessment now has a touch screen tablet computer to access learning opportunities and a light writer to augment his speech[4 5 7 9]. He developed new communication relationships with staff in his new school[4 5]. He has a range of people outside school who have a positive relationship with him some of whom are developing facilitation skills to support his communication[4 8]. The daily briefing in school provides a routine for communicating the timetable and options for the day and opportunities to make choices and lunchtime and write emails to family and friends. He has access to activities he enjoys including science, physical activities, listening to music, typing and mixing with peers at break and lunch times[4 5 6]. All his work is differentiated although there are concerns that he is not receiving an age appropriate curriculum and that school work in general is presented at a lower level than he is capable of[5 6 7 8].

What are adults' perceptions of why changes in the pupil's communication and demonstration of learning have occurred?

The teaching staff attribute changes to the pupil maturing, getting used to new staff and a new school situation and the use of facilitation[5 8].

The parent attributes changes to the use of facilitation, having a very open staff team who are willing to try things out and explore what works and most people adopting the least dangerous assumption (i.e. absence of evidence is not evidence of absence). However she feels that changes have been hindered by him having to get to know new staff, the increased expectations that have

occurred because of being introduced to facilitated typing, tiredness and the onset of epileptic seizures during the night. These have all affected his capacity to cope with so much that is new[4 8].

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

The following extracts from the AAC/FCT trainers CAP Assessment report details how AAC/FCT has been used to support this pupil's to access communication aids and demonstrate learning.

> *"Although he is in the early stages of an FCT programme this pupil has already demonstrated potential for independent access to communication aids if the selections are appropriately spaced and sometimes when he is accessing a keyboard.*
>
> *He has low tone, echolaic speech and can be slightly impulsive and perseverative when typing. He has problems initiating which he can overcome with support of a 1, 2, and 3 prompt or "ready, steady, go". He has low muscle tone. He needs to concentrate to keep his hand eye co-ordination synchronised.*
>
> *He can type up to level 13 of the FCT ladder (Appendix 11) with an experienced facilitator. He is able to type with a range of facilitations including: wrist support, touch and release, verbal encouragement, light facilitation at the elbow. He occasionally points to letters within a phrase independently. During assessment he was very participative in trying out a range of positions where he could fix his arm rather than rely on facilitation. This reduced the facilitation to a minimum. He has a laptop computer, which has been provided by the LEA and THE GRID has been provided by school although it still needs to be loaded. It was reported at school that he needs some facilitation to use the mouse. At school he is typing up to level 4 of the FCT ladder and staff are about to work towards levels 5 and 6 using a cherry keyboard attached to the computer. At home he uses a cherry keyboard attached to the home computer and much of his typing is emails to his father in Italy. With his mother he is working at*

levels 8 to 13. The reason that he types lower on the ladder at school is that staff are still training in the use of facilitation.

The light writer gave him the best communication strategy as he managed his most independent typing with it and it enabled him to use the voice output to imitate and develop his own verbalisation.

A tablet computer would give him the best access to ways of interacting with curriculum topics and recording his work as he could move between direct selection of choices from an appropriate number and arrangement of choices while working towards independence. He could additionally use an on screen keyboard as a complement to this when he needed to expand on his answers" (CAP Assessment Report March 2004).

An additional piece of evidence is available for this pupil. A 3rd year psychology student conducted an analysis of this pupil's on and off task behaviour using fine graded video analysis of parts of the video data. She reports that he was found to look at the target more when facilitated and make more hand movements (touching his face) on a non-facilitated task. He vocalised to the same degree on both tasks. He spent 73 percent of the time looking at the target on the facilitated task but only spent 51 percent of the time looking on the non- facilitated task. The mean length of each looking episode on the facilitated task was 43 seconds in comparison to 5 seconds spent looking, on average, on the non-facilitated task. The longest amount of time spent looking on the facilitated task was 99 seconds and only 14 seconds on the non-facilitated task. Only 13 percent of the time was spent making hand movements on the facilitated task and 35 percent of the time spent making hand movements on the non-facilitated task (Haddow 2005: 24). She goes on to argue that because demonstration of learning cannot take place without sufficient on talk behaviour, facilitation for this pupil increased his means to communicate and demonstrate learning.

What do adult's report as perceived changes in their knowledge, practice and attitudes changed?

Four out of six people took part in structured interviews ($3^{4\,5}$) or completed self- report questionnaires (1 support worker). There were no returns from one support teacher and one support worker. The numerical results are detailed in Appendix 8. All the respondents reported changes in their knowledge, practice and attitudes towards using low-tech options and computer software to develop communication aids and support pupils in communicating and demonstrating their learning except one parent who found that using pen and paper was quicker and easier than using computer software to develop communication aids.

All four respondents reported that their knowledge of the physical barriers to communication had increased and their use of strategies to overcome these had increased. All but one (class teacher) reported that their knowledge of environmental barriers to communication had increased and all but one (support teacher) reported that their use of strategies to overcome/alleviate environmental barriers to communication had increased. Those who did not report any changes in these areas attributed this to "already knowing the barriers" (parent) and "already doing this" (support teacher).

All four respondents reported that their attitude towards pupils with severe communication impairment had changed and that their understanding of these pupils had increased.

All four respondents reported that they viewed pupils with severe communication impairment as having more potential than they did previously and that low-tech and high-tech aids provide more options than they did previously.

One respondent did not have any reservations about using the strategies they had learnt about (support worker). Of the three who did have reservations, one attributed their concerns to their own confidence (parent); one attributed their concerns to the potential of influencing a person's communication (parent); two were concerned about physical contact (teaching assistants) and all three were concerned about other people's attitudes toward what they were trying to do (due to the potential for being misunderstood[5]*)*. The parent did note that although she

wasn't concerned about the consequences of offering more choices, it was difficult if he chose things she really did not want him to do. Additionally the parent expressed reservations about the lack of confidence of school staff in facilitation.

All four respondents reported changes in their practice. These changes included the following:

- Assuming he knows/understands – adopting the least dangerous assumption[4]
- Involving him indecision making (support worker)
- Willingness to try different things[5]
- Increased confidence - don't worry if I make a mistake[5]

The following were reported to have influenced their changes in practice:

- Seeing this pupil respond to questions and demonstrate what he knows[4]
- Realising the 'potential' I can give to pupils

What factors helped and/or hindered the introduction and implementation of the project?

Five out of nine people took part in structured interviews (4[4 5 9]) or completed self-report questionnaires (support worker). There were no returns from one support worker, the deputy SENCo and speech and language therapist. The numerical results are presented in Appendix 9.

Most participants did not have strong views about how the project was set up. However the five respondents commented positively on the introduction of the project to school managers and parents (5) and four were positive about sharing information with other support services/agencies. The parent in particular notes that "it is great to feel involved and consulted earlier rather than later"[4].

Most participants reported positively about the training. The majority were positive about the range and number of people who took part in attending (4) and delivering the training (5). Comments relating to the involvement of AAC and FCT users included "crucial" and "fabulous to see FC users in action and to be able to ask all those questions only they can answer"[4]. It was also noted to be "really useful to watch and hear about the skills involved in being a facilitator – 'like

playing a duet'"[4]. Hindering factors included the amount of time the training lasted (2) and the lack of funding for school staff to be released (5). Comments about these included "pressure from managers about the amount of time staff were out of school"[9] and "it was great to devote all that time but it did restrict the numbers able to attend"[4]. All respondents viewed the majority of the content of the training positively. One viewed the session on physical and sensory impairments as "vital". One or two did not comment on the ladder, fading towards independence and validation and influence sessions. One person commented that the planning of activities helped in being able to share ideas but hindered due to the fact that these ideas were not then implemented in school[4].

The implementation of the ideas and strategies was reported to be hindered by the structure/timetable of the day ("saw as timetabled and needs to go across everything"[9]); school structures and staffing ("school wheels turn so slowly and the whole school needs to be aware"[4] and the provision and use of software ("entrapped with licences"[9], "need time to load programmes onto the computers and get familiar with them[5]).

The monitoring and follow up support to pupils and adults was generally viewed as positive. The parents particularly valued the visits to school/home by the AAC/FCT trainer and the researcher "big help each time, really unstuck blocks"[4]. The use of videos of the pupil being facilitated were reported as being particularly helpful in "promoting insights and seeing what works at home"[9]. The SENCo also commented that "the whole project made me reassess the pupils capabilities and communicate better with him"[9].

What are adults' views on future provision and practice?

Of the five people who responded all of them wanted the project to continue and extend to include other pupils (the SENCO did not want to extend until staff had time to consolidate what they had learnt). All felt that more adults should be given the opportunity to be trained in AAC and FCT and expressed the desire to maintain/increase their knowledge and experience of AAC and FCT through, for example, "more training on specific areas"[9].

Sources of data:

[1]School reports for AAC/FCT assessment and Mainstream Support Group bid for LEA funding 2004

[2]Parent report for AAC/FCT assessment June 2004

[3]Reports for consideration of placement in focus provision March 2004

[v1]Video data, event sampling September – October 2004

[4]Interview with parent May 2005

[5]Interview with two teaching assistants June 2005

[6]Annual Review of Statement March 2005

[7]Reports/updates from AAC/FCT trainer November 2004 – June 2005 (including the CAP assessment report)

[8]Researcher Log October 2004 – June 2005

[9]Interview with SENCo June 2005

[v2]Video data, event sampling November 2004 – June 2005

IV. CASE STUDY: Pupil c, School B

Contextual Information

This pupil was 12 years old in September 2004. He was receiving his education in a mainstream secondary school with a focus provision for pupils on the autistic spectrum. He had a delayed transfer to his secondary school in September 2004 and was a Year 8 pupil in a Year 7 tutor group. He had previously been educated in a mainstream primary school. He accessed part of his education in the focus provision and attended some mainstream lessons with Year 7 pupils.

His teaching assistants attended the training and some of his additional teaching staff accessed parts of the support programme in school (these were the same staff who were supporting pupil a). Although his mother was keen to take part in the training and the project as a whole, work commitments make it impossible for her to do this.

What changes have occurred in the pupil's means, reasons and opportunities to communicate?

Means and reasons

Table 4.6 provides examples of this pupil's means and reasons to communicate before and after the introduction for the intervention. There is general agreement amongst teaching staff that this pupil has increased the amount of spoken language he uses and reduced his use of signing. He is described as a "sociable student with a good sense of humour"[4 5] who uses a wide range of reasons to communicate.

It is difficult to establish if there has been an increase in the use of pointing or typing because this pupil was typing regularly before the project and appears to have needed much less support than pupil b to access his communication aids. An example of his typing with facilitation is provided to allow the reader to gain a picture of what type and level of support he appears to benefit from.

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	• Groans[1 v1] • Sings and hums[1] • Makes laughing noises when amused/teasing[v1] • Whispers single words to get what he wants (crisps, computer, toilet, dinner)[1] and indicate choices (no, away)[3] • Beginning to put two words together (toilet please)[1 3] • Reads 20+ key words[1 3] and numbers[v2] • Reads simple text with an adult[1 3] • Joins in singing[1]	• Squeals when excited[4] • Groans when upset[4 v2] • Cries or sobs to avoid doing something[5] • Hums phrases or melodies[5 v2] • Whispers single and two word phrases to make requests (computer please)[4 5], ask questions (swimming tomorrow?)[4 5] and comment (simple)[v2] • Reads out loud in a whisper from simple text and reads daily timetable from Makaton symbols with signs[4 5 6 7 v2] • Use an end word or phrase in a chant, rhyme or song, introduces next line in a song[5]
Facial expression, body movement, gesture and signing	• Stares to indicate he is upset[2] • Goes and gets what he wants[2] • Walks away when he has had enough[2] • Drops to floor[3] • Flaps arms[3] • Touches, hugs and leans on adults[3 v1] • Signs some single words (toilet)[1 3]	• Smiles[4 5 v2] • Goes stiff, freezes[4] • Goes floppy[4 v2] • Waves farewell[4] • Pushes people away[4] • Takes adults to what he wants[4] • Walks away when he does not want to do something[4 v2] • Makaton signs some single words (toilet)[4] • Join in actions in music interaction[4]
Eye gaze, giving, pointing (with and without facilitation)	• Stands and stares at what has upset him[2] • Brings objects (plate for dinner)[2] • Selects and point to photos and pictures[1 v1] • Selects and points to symbols with words for activities[1 7] • Point to a range of single words[v2] • Types simple sentence on Alpha Smart[1] • Writes words (first name) and numbers when prompted[v2]	• Points to objects, Makaton symbols with words and words only with and without facilitation (tends to hold adults hand to point with the adults finger)[4 5 6 7 v2] • Can group pictures of animals into categories (live in water, insects, no legs)[v2] • Types words (cat, book, horse) and simple sentences (I went in a boat on the lake) with and without facilitation in response to diction and answering questions[4 5 6 7 v2]

TABLE: 4.6 Examples of Pupil c's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

In May 2005 this pupil typed using a keyboard with a guard and letter board on a touch screen tablet computer. He could type familiar dictated words such as his name without facilitation. He could type longer names such as American Adventure with the trainer sounding out or naming letters he got stuck on. Facilitation was used to slow him down and he typed very quickly, often without appearing to think through what he was trying to do. For example, when asked to type Adventure he typed 'and' very quickly and stopped. It was only when the trainer held his arm to slow him down that he appeared to really attend to the task. He typed a dictated sentence (I went on a boat on the lake) with facilitation to slow him down and some sounding and naming of letters for 'lake'. When the task changed to type single words and point to pictures in response to questions he said "simple" and looked at the trainer as if to say "this is easy". He has not been facilitated higher than level 6 on the ladder (Appendix 11) so it is not possible to say at this point in time whether typing will enable him to communicate and demonstrate learning in a more consistent and reliable way.

The evidence for the perceived reasons why this pupil communicates and demonstrates learning is recorded in Table 4.7. There is general agreement that he is using speech more to make requests[4 5], ask questions[4 5] and occasionally comment on things[v2].

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes [1]	Yes [4 5]
Asking for help		Yes [4]
Regulating/directing others	Yes [2]	Yes [4 v2]
Refusing or protesting	Yes [1 v1]	Yes [4 v2]
Ending an interaction	Yes [1 v1]	Yes [4 v2]
TO EXPRESS THEMSELVES		
Express needs	Yes [1]	Yes [4 5]
Express likes/dislikes	Yes [1]	Yes [4 5 v2]
Express agreement (yes)	Yes [1]	Yes [4 5]
Express disagreement (no)	Yes [1]	Yes [4 5]
Express feelings	Yes [1 v2]	Yes [4 5 v2]
TO COMMENT ON THINGS		
Commenting		Yes [7 v2]
Giving information		Yes [4 5]
Responding to questions (choices)	Yes [1]	Yes [4 5 v2]
TO GAIN INFORMATION		
Ask questions		Yes [4 5]
FOR SOCIAL REASONS		
Greetings and farewells		Yes [4 5]
Getting attention	Yes [v1]	Yes [4 5]
Initiating starting interaction		Yes [4 5]
Apologising		Yes [4]
Joking or teasing	Yes [1 v1]	Yes [4 5 v2]
Chatting		To himself [4 v2]

TABLE 4.7: Evidence of Pupil d's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil had access to low tech options including Makaton signs with words for his visual timetable and making choices[1]. He had access to an Alpha Smart for recording his work. There are reported to have been routines opportunities for him to communicate throughout the day and through activities he enjoyed (singing, computers, reading with an adult, music)[1] [3]. He was reported to have a good communication relationship with his teacher, teaching assistant, music interaction teacher and his family[1 2].

Following the introduction of the intervention he continued to have daily access to Makaton signs with words which were used to organise his visual timetable for him to read to staff during the briefing session every morning[4 7]. He

had access to a computer on a daily basis and had been provided with his own laptop with a separate keyboard with a key guard to support more accurate typing. Use of the Grid software programme was being developed to provide him with options to access the curriculum[4 7]. He had developed new communication relationships with this teaching assistants and the music interaction teacher (who provided to give him access to the music sessions he enjoys)[4 5]. However, it is clear from speaking to staff and observing him in school that he does not get access to his lap top for every lesson and the software needed to improve his access to the curriculum has not been used to any great extent due to problems with licences and getting the programme loaded onto the computer[7]. There also appears to be less of an expectation that this pupil has the motivation or potential to improve his communication and demonstration of learning[6 7].

What are adults' perceptions of why changes in the pupil's communication and demonstration of learning have occurred?

The teaching staff attribute the increased use of words by this pupil to the pupil maturing, getting used to new staff and a new school situation and the use of facilitation[4 5].

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

As noted above this pupil tends to need facilitation to slow him down and focus his attention[6 7 v2]. However at this point in time he does not appear to have had consistent access to adults who are confident in providing consistent facilitation and access to high-tech options and the computer software that he needs to increase his access to an age appropriate curriculum. Ideally he should be using a voice output device in all learning situations to scaffold his developing use of language and enable him to increase his typed communication[6]. He also needs access to activities, which focus on developing his listening and thinking skills[6].

Sources of data

[1]School information for AAC/FCT assessment June 2004

[2]Parent information for AAC/FCT assessment June 2004

[3]Mainstream Support Group bid for additional LEA resources 2004

[v1]Video data, event sampling September - October 2004

[4]Interview with two teaching assistants May 2005

[5]Annual Review April 2005

[6]Report/updates from AAC/FCT trainer November 2004 – June 2005

[7]Researcher log October 2004 – June 2005

[v2]Video data, event sampling November 2004 – June 2005

V. CASE STUDY: Pupil d, School C

This pupil was 10 year old in September 2004. He was receiving his education in a special school for pupils with severe leaning difficulties and has the label of autism.

His teaching assistant and father attended the training. His teaching assistant, teacher and mother accessed some of the follow up support programme.

What changes have occurred in the pupil's means, reasons and opportunities to communicate and demonstrate learning?

Means and reasons

Table 4.8 provides examples of this pupil's means and reasons to communicate before and after the introduction of the intervention. There is full agreement from the data collected that this pupil has increased his use of pointing with and without facilitation. He is pointing to more symbols, symbols with words, words and letters[3]. It's interesting to note that he seems to be attempting to reproduce phonemes and words when pointing or touching with and without facilitation. It is also noted that "facilitation is used when asked to point to unfamiliar objects, symbols with words, words or letters particularly when he appears to be losing focus and/or needs support to control his movements (e.g. writing, tracing, typing letters)"[5].

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	Vocalisations were described as main means to communicate[1] [2] • Squeals[1] [2] [v2] • Attempts to vocalise characters and objects in a book when pointing to them[2] [v1] • Speaks a few clear words for things he can see[1] [v2]	Continues to vocalise using: • Squeals with excitement and anticipation[3] [4] [5] [v2] and will groan "like he is answering you back"[3] • "Gabbles"[3] and "mumbles on"[4] using intonation that follows the format of a sentence[3] and/or question[4] [v2] (in taxi "chats" to driver, "asks" using question intonation when he want to know what's on TV) • Uses phonetic sounds that appear to represent words "as if he knows what he wants to say" (when pointing to his plate, familiar adults and peers, pictures in books)[3] [v2] • Verbalises some words (yes, Jane, cup) with facilitation to support him to touch the cup and prompt verbalisation[3] other words include car, look and mum to refer to many people[4] [v2]
Facial expression, body movement, gesture and signing	• Smiles[v1] • Rocks[v1] • Spits with excitement/interest[v1] • Taps others to gain their attention[1] [v2] • Uses some Makaton signs spontaneously[1]	• Smiles especially when praised and when engaging in activities he enjoys[3] [v2] • Push people away[-4] • Take adults to what he wants[3] [4] • Taps others and points to gain attention and show what he wants[v2] • Shakes his head and turn away[3] [v2] (when he doesn't want a type of food or to do an activity) • Runs or walk away[3] [4] • Hits out or chews his left hand[3] [4] (when frustrated, excited, frightened, angry or disagrees with adults) • Uses some Makaton signs (toilet, book) and will occasionally use the sign for 'sorry' when facilitated[3]
Eye gaze, giving, pointing (with and without facilitation)	• Objects[1] [2] • Pictures in books[2] (loves books and can point to pictures on request)[v1] • Everyday Makaton symbols with words[1] [v2] • Some words (own and other pupils names)[2] • Some letters (s)[2] Noted to 'love books' and able to point to detailed pictures on request[5]	• Objects (especially food)[3] [4] [7] [v2] • Pictures in books or on computer screen[3] [4] [7] [v2] • Makaton symbols with words (weather, feelings, familiar foods, drinks, activities, colours, animals, mum, father, sister, girl) without facilitation)[3] [v2] • Words does appear to have some sight vocabulary (own and other pupils names, days of the week, car, yes, no, mum, dog, cat, happy)[4] [v2] • Writes/types a range of letters[3] [v2] and some words with facilitation (Sam, car)[v2]. This is mainly letter matching letters and in response to verbal prompt for the sound of the letter[v2] Using pointing to all these options in response to questions, to express agreement/disagreement, likes and dislikes[v2]

TABLE 4.8: Examples of Pupil d's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

The perceived reasons for pupil d to communicate and demonstrate learning are recorded in Table 4.9. There is general agreement that this pupil has increased his consistent use of communication to express agreement (yes) and disagreement (no). This had previously been inconsistent and unreliable prior to the project. His father had stated at the beginning of the training that he wanted to know if his son knew the difference between yes and no[7]. He has also increased his communication of what he likes and dislikes and responses to questions related to activities and feelings. He is now described as consistently and accurately making choices[3 5].

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes [1]	Yes [3 4 v2]
Asking for help		Yes [3]
Regulating/directing others		Yes [3 v2]
Refusing or protesting		Yes [4 v2]
Ending an interaction		Yes [4 v2]
TO EXPRESS THEMSELVES		
Express needs	Yes [1]	Yes [3 4 v2]
Express likes/dislikes, choices	Yes [1 v1]	Increased [3 4 v2]
Express agreement (yes)	Inconsistent [1 v2]	Yes [3 4 v2]
Express disagreement (no)	Inconsistent [1]	Yes [3 4 v2]
Express feelings		Yes [3 4 v2]
TO COMMENT ON THINGS		
Commenting	Yes [1 v2]	Yes [3 4 v2]
Giving information		
Responding to questions	Yes [v2]	Yes [3 4 v2]
TO GAIN INFORMATION		
Ask questions		Yes [4]
FOR SOCIAL REASONS		
Greetings and farewells	Yes [1]	Yes [3 4 v2]
Getting attention	Yes [1 v2]	Yes [3 4 v2]
Initiating starting interaction	Yes [v2]	Yes [3 4 v2]
Apologising		Occasionally [3]
Joking or teasing		Yes [4]
Chatting		Yes [3 4]

TABLE 4.9: Evidence of Pupil d's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil was described as having inconsistent access to Makaton signs and symbols and a lack of opportunities for him to respond in a consistent manner over time through regular routines[1]. He did not have consistent access to communication boards or opportunities to respond using yes and no. It is not clear what communication relationships he had with adults.

After the intervention this pupil is reported to have increased opportunities to make choices throughout the day (e.g. greeting times, register, choice of physical and other activities, choice of lunch) in relation to the curriculum and activities through the use of low technology options. He has access to a wider range of Makaton symbols with words; multiple choice boards for activities, food, feelings; yes/no and letter boards in school[3]. His Makaton symbols board for feelings has led to less reliance on trying to establish his feeling from his expressions alone[3]. Also his strong interest in books has provided lots of opportunities for responding to questions using multiple choice and yes/no[3].

He has good communication relationships with most if not all the people in school and at home[3 4]. He has very good communication relationships with his teaching assistant, teacher and parents[3 4]. His communication relationship with his teaching assistant, in particular, has changed For example, his TA commented at one of the feedback sessions on the training day that she 'now felt like she knew' the pupil whereas she did not feel that way in the past[7].

At home, his mother does not feel her son's access to opportunities to communicate have changed, although she does refer to him having choice cards and pointing to letters with his father[4].

What Are Adults Perceptions Of Why These Changes Occurred?

The teaching staff attribute changes to the pupil having more opportunities to communicate and demonstrate learning[3 5]. The teaching assistant reports that this is due to her attendance on the FCT course, which focused on communication and led to her thinking more about strategies to get to choices. The teacher feels that the teaching assistant shared what she had learnt so that

additional strategies were introduced in the classroom. The teaching staff also feel that the use of physical prompts and access to more Makaton symbols with words has affected the changes that have occurred[3].

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

It was noted above that facilitation has mainly been used when this pupil has been asked to point to unfamiliar objects, symbols with words, words or letters particularly when he appears to be losing focus and/or needs support to control his movements (e.g. writing, tracing, typing letters)[5]. He is described as being very impulsive and "going to point before he has looked at the options"[6]. Facilitation has been used to slow him down and support him to make controlled choices. He also benefits from being prepared to focus by using verbal prompts such as "one, two, three go"[6]. He continues to be unclear which hand he prefers to use and he has a tendency to use both hands to point and type. This makes it difficult to decide on which hand to support or whether to encourage two-handed typing[6].

The introduction of an increased number of low-tech aids has clearly increased his access to opportunities to communicate and demonstrate his learning. He is motivated and supported by visual tasks rather than ones that are based purely on listening[6]. Consideration of what high-tech options might further support him as part of his current CAP assessment.

An additional piece of evidence is available for this pupil. A 3rd year psychology student has conducted an analysis of this pupil's on and off task behaviour using fine graded video analysis of parts of this video and others. She reports that he was found make less rocking movements with physical support than without. He made rocking movements with physical support for 5 percent of the time and for 8 percent of the time without physical support. The mean length of each rocking episode with physical support was 1 second and without physical support, the mean length was 2 seconds. The longest amount of time spent rocking with physical support was 3 seconds and 13 seconds without support. He vocalised less with physical support than without. He vocalised with physical

support for 9 percent of the time and vocalised for 17 percent of the time without physical support. (Haddow 2005: 24). As with pupil b, she goes on to argue that because demonstration of learning cannot take place without sufficient on task behaviour, facilitation for this pupil increased his means to communicate and demonstrate learning.

What do adult's report as perceived changes in their knowledge, practice and attitudes changed?

Two out of three people took part in structured interviews. The pupil's father was unable to attend the interview due to work commitments. The numerical results are detailed in Appendix 8.

Both respondents indicated that their knowledge of low low-tech options had not increased but the teaching assistants use of them had. Both reported that their knowledge of high tech options had increased and the teaching assistant stated that here use of these had increased. The teaching assistant stated that her knowledge and use of and computer software to develop communication aids and support pupils' communication had increased.

The teacher's knowledge of physical barriers had changed and both reported that they had increased the use of strategies to overcome these. The teaching assistants knowledge of environmental factors and use of strategies to overcome them had increased and involved "negotiation to produce the resources needed". Both stated that their attitude towards pupils with severe communication impairment had changed and the teaching assistant also stated that her understanding of these pupils had also increased. Both reported that they thought low-tech aids provided more options than they did previously.

Both did have reservations about using the strategies they had learnt about and attributed their concerns to the potential of influencing a person's communication (e.g. through eye pointing) and the physical contact required to facilitate. Both reported changes in their practice in using more low-tech aids especially yes/no options. The following were reported to have influenced their changes in practice:

- Increased awareness of communication in general[3]

- Positive attitudes from parents and colleagues[3]
- Trying out ideas and finding they worked[5]

What factors helped and/or hindered the introduction and implementation of the project?

Two out of three people took part in structured interviews. The pupil's father was unable to attend the interview due to work commitments. The numerical results are detailed in Appendix 9.

Neither participant had strong views about how the project was set up but the teaching assistant felt that the initial AAC/FCT assessment was helpful.

Only the teaching assistant had been able to attend the training. She identified one hindering factor only being able to attend part of the training. She was positive about all aspect of the content and delivery of the training particularly the general discussion about theories and strategies and concerns and emotional challenges noting that "confidentiality was brilliant element and enabled people to discuss more openly". She also commented on the "excellent" session on the human right to communicate by a communication aid user.

The implementation of the ideas and strategies was reported to be hindered by the structure of staff/support in the school. The teacher commented that she felt pupil should be taken out of the class to receive input.

The monitoring and follow up support to pupils and adults was mainly accessed by the teaching assistant who felt this had been generally helpful.

What are adults' views on future provision and practice?

Both felt the project should be continued for pupils involved and would like to see it extended to include other pupils. Both knew of more children who could benefit from being given increased options in AAC although the teacher was not sure about other pupil who might benefit from FCT due to her concerns about influencing. In contrast the teaching assistant reported that she was "constantly thinking about other pupils who could benefit" and felt she could "confidently identify other pupils. Both felt that more adults should be given the opportunity to be trained in AAC and FCT want to maintain/increase their knowledge and experience in this area.

Sources of data

[1]Speech and Language Therapist pre-intervention assessment report

[2]Annual Review 2004

[v1]Video data, event sampling September - October 2004

[3]Interview with teaching assistant May 2005

[4]Interview with mother May 2005

[5]Interview with class teacher May 2005

[6] Report/updates from AAC/FCT trainer November 2004 – June 2005

[7]Researcher log October 2004 – June 2005

[v2]Video data, event sampling November 2004 – June 2005

VI. CASE STUDY: Pupil f, School C

This pupil was 9 years old in September 2004. He was receiving his education in a special school for pupils with severe leaning difficulties and has the label of autism. He was placed in a class of pupils who were all on the autistic spectrum with limited functional speech. In January 2005 a new class teacher was appointed.

His teaching assistant and new class teacher were not able to attend the training but were part of the follow up support programme. His mother was happy for him to be included in the project but was unable to attend the training or support programme.

What changes have occurred in the pupil's means, reasons and opportunities to communicate and demonstrate learning?

Means and reasons

Table 4.10 provides examples of this pupil's means and reasons to communicate before and after the introduction of the intervention. There is evidence from the data collected that this pupil has increased his use of pointing with facilitation. He can point to objects, pictures, pictures with words, symbols with words, words, letters and sentences with facilitation in response to questions, to make a choice and express likes and dislikes[4 v2]. He can use a keyboard and an onscreen letter board to type letters, words and short phrases with facilitation.

His teacher provides one example of this pupil's use of typing with facilitation:

This pupil pointed to the given words in order to make the sentence "my name is ____". He was then instructed to find each letter of his name on the keyboard. The pupil's hand was held but he did take his hand to the correct or near to the correct key. Sometimes I hovered his hand over the incorrect part of the keyboard but he would not attempt to press any keys. He needs to work on isolating his index finger to point and curl the other fingers back". (Class teacher facilitation log February 2005)

She notes in the interview that his "concentration is great when facilitated on reading and spelling activities, and he is more responsive and affectionate

during these sessions". Prior to the intervention he had not demonstrated any reading or spelling ability (e.g. would not choose his name from a choice of two). However she expresses concern that he does not focus this well on any other activity.

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	• Generally silent[1 v1] • Screams in temper[2 3] • Makes repetitive sounds (chk-chk)[2 v1]	• Squeals with excitement[4] • Makes repetitive sounds (chk-chk)[4 v2]
Facial expression, body movement, gesture and signing	• Smiles in response to familiar faces and activities he enjoys (tickling, stroking, chasing)[1 3] • Screw face up when not want to do something[v1] • Body movement and gesture are main means of communication[3]and will use gesture to get favourite activity repeated[1] • Throws himself to the floor when angry[1] • Turns his head when his name is called[1] • Turns away from adult when not want he want to stop[v1]	• Smiles to show pleasure, mischief[4 v2] • Shakes head to show excitement, frustration, mischief[4 v2] • Frowns/screws face up to show displeasure (when something is taken off him, does not want to do something)[4 v2] • Grits his teeth and shakes his head if he does not want to do something[4 v2] • Pushes people away to show displeasure, wants to stop[4 v2] • Throws himself to the floor when upset, silent crying[4] • Walks or runs away[4] • Turns/squirms away from adult when he wants to stop[v2] • Takes adults to things that are broken to ask for help[4]
Eye gaze, giving, pointing (with and without facilitation)	• Looks at people when he wants and action repeated (tickling)[1] • Recognises some objects and photos[2], pictures in books[v2] and Makaton symbols[1] • Can copy some simple words[1]	• Stands on chair and looks at you if you say no in joking/teasing way[4] • Will focus on objects, pictures, symbols with words, words and letters (very quickly so have to look carefully to notice)[4 v2] • Can point to objects, pictures with words, symbols with words, words and letters with facilitation in response to questions, to make a choice and express likes and dislikes[4 v2] • Can type letters and words with facilitation[4 v2]

TABLE 4.10 Examples of Pupil f's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

The AAC/FCT trainer has noted on each of her visit that his engagement in the tasks she presented increased when she increased the speed and complexity of the task[5]. One example of this is from May 2005 when he completed some comprehension exercises based on a short passage about a grasshopper:

The pupil responded to answering comprehension questions by pointing with facilitation to A, B, C, or D on a four in line cheap talker device to select from multiple choice options. The trainer verbally prompted him to respond by saying "1, 2, 3, go" and physically supporting him by holding his hand and isolating his index finger so he can point accurately. He responded accurately to two questions but it was clear that this could have been chance so the trainer tried to find out if he knew which letter to press for each option:

Trainer asks: When the teacher felt the grasshopper in her hair what did she do?

Pupil correctly presses letter B, which represented " the teacher screamed"

Trainer asks: Ok just suppose the teacher had "screamed and shook her hair", which letter would you choose?

Pupil correctly presses letter A

Trainer asks: OK just suppose the teacher had "screamed and run out of the room", which letter would you choose?

Pupil incorrectly presses letter D then when prompted to look again at the options on the page he presses letter C correctly

Trainer asks: Ok just suppose the teacher had "laughed", which letter would you choose?

Pupil correctly presses letter D several times

The trainer then moved to using a touch screen tablet computer having loaded a programme that enabled the pupil to type using an on screen letter board and word prediction.

Trainer says: I want you to tell me what happened after the teacher screamed, you make up the story
Pupil pressed "f r i" then chose "frightened" from the word prediction list that appeared under the letter board. He went on to press "y o u r" and chose really from the word prediction list. He then pressed "g b" and the trainer intervened saying that doesn't make sense. She deleted these letters and prompted the pupil to continue. He pressed "t e r i b l". The trainer praised him and encouraged him to press the text box at the top of the screen, which played back the full phrase "frightened you really terrible".

It is also important to note that this pupil's level of concentration and attention was described as very short (2 seconds to 10 minutes on a good day)[v1]. However he was generally able to maintain his concentration and attention in this situation above for over 40 minutes.

The perceived reasons for pupil d to communicate and demonstrate learning are recorded in Table 4.11. As noted above this pupil has increased his response to questions, making choices and expressing his likes and dislikes.

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes[1]	Yes[v2]
Asking for help		Yes[4]
Regulating/directing others	Yes[1]	Yes[4 v2]
Refusing or protesting	Yes[2 3 v1]	Yes[4 v2]
Ending an interaction	Yes[v1]	Yes[v2]
TO EXPRESS THEMSELVES		
Express needs	Yes[2]	
Express likes/dislikes	Yes[1]	Yes[4 v2]
Express agreement (yes)	Inconsistently[12]	
Express disagreement (no)	Inconsistently[12]	
Express feelings	Yes[1 2 3]	Yes[4 v2]
TO COMMENT ON THINGS		
Commenting		Yes[5v2]
Giving information		Yes[5 v2]
Responding to questions (choices)	Yes[2]	Yes[5 v2]
TO GAIN INFORMATION		
Ask questions		
FOR SOCIAL REASONS		
Greetings and farewells	Yes[1]	
Getting attention		Yes[4]
Initiating starting interaction		Yes[4]
Apologising		
Joking or teasing		Yes[4 v2]
Chatting		

TABLE 4.11: Evidence of the pupil f's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil was described as having inconsistent access to visual supports such as photos and Makaton. He lacked opportunities to respond through regular routines and activities. It is not clear what communication relationships he had with adults.

After the intervention this pupil has had increased opportunities to high-tech options in particular because he appears more motivated by computer based work. He has used computer programmes including Clicker 4, First Keys, Word and Fuzz Buzz. He appears to have developed a communication relationship with his teaching assistant and new teacher and is reported to have routine opportunities to make choices. He appears to have improved in his response to instructions and is described as being much calmer. An

individualised programme of work has been developed based on computer activities[4 6].

What are adults' perceptions of why these changes occurred?

The class teacher attributes changes to this pupil having a good routine. She feels that when he is being facilitated he knows what is expected of him has been supported by "the discipline of FCT"[4].

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

The use of facilitation in particular has supported this pupil to focus and attend for significantly longer periods of time than he has done in the past. He has needed support to isolate his index finger and initiate a pointing movement. The use of verbal supports such as "are you ready, one, two, three, go" appears to help him begin a movement. He is noted to respond best to "firm, short verbal support"[5]. He requires a lot of verbal prompting to keep his eyes focused on the keyboard and should be physically pulled back when he is not looking. He has been supported up to step 11 on the ladder (Appendix 11) by an experienced facilitator. School staff should be working on steps 1–6 until they gain more confidence in facilitation[5]. It would appear that this pupil is able to communicate more through being facilitated to point to pictures, signs with words, letters words and phrases. He is currently more motivated by high-tech options but he should also be encouraged to develop his use of low-tech options.

What do adult's report as perceived changes in their knowledge, practice and attitudes changed?

One out of two people took part in structured interviews. The teaching assistant was not able to attend this part of the interview. The support worker did not return the questionnaire.

The teacher has indicated that her knowledge, use and attitudes in relation to all the questions has increased and/or changed in a positive direction. She does have reservations about implementing what she has learnt in relation to adversely influencing the pupil's communication; the physical aspect of facilitation; the consequences of offering more choices (not sure if he really

understands the choices he is making) and other people's reaction to what she is trying to do. She expresses particular concern about the progress this pupil is making in one to one session with both herself, the teaching assistant and the AAC/FCT trainer and the fact that he does not demonstrate these skills at any other times.

She does feel that her practice has changed but this is largely related to being new to teaching in a special school.

What factors helped and/or hindered the introduction and implementation of the project?

The teacher and teaching assistant took part in this element of the structured interviews.

Both felt that the use of an action research model; survey to identify potential need; introduction to parents and carers; selection of pupils; initial assessments and sharing information with other support services and agencies had been helpful. Neither had been able to attend the training although the teaching assistant who was employed at the school at the time of the training stated that not being able to attend hindered her ability to support the pupil. She also noted that one of the members of staff who did attend the training does not actually work with students.

The implementation of the ideas and strategies was reported to be hindered by the structure and timetable of the day and staffing/support in the school. They feel that the pupil needs one to one time and space free from distractions for him to reach his potential. Whilst there is access to a computer and software they feel that the computer is not in a good position in the classroom and there is a lack of access to software. Additionally the fact that this pupil will only work with a few staff has been a hindrance.

The monitoring and follow up support to pupils and adults was helped by visit form the AAC/FCT trainer and researcher, however these were viewed as too infrequent and email contact would have helped.

What are adults' views on future provision and practice?

Both felt the project should be continued for pupils involved and would like to see it extended to include other pupils. Both knew of more children who could benefit from being given increased options in AAC and FCT. Both felt that more adults should be given the opportunity to be trained in AAC and FCT want to maintain/increase their knowledge and experience in this area.

Sources of data

[1]Statment of Educational Need 2003

[2]Speech and Language Therapist Survey comments May 2003

[3]School report for the AAC/FCT assessment June 2004

[v1]Video data, event sampling September - October 2004

[4]Interview with teaching class teacher May 2005

[5]Report/updates from AAC/FCT trainer November 2004 – June 2005

[6]Researcher log October 2004 – June 2005

[v2]Video data, event sampling November 2004 – June 2005

VII. CASE STUDY: Pupil g, School C

This pupil was 10 years old in September 2004. He was receiving his education in a special school for pupils with severe leaning difficulties and has the label of Cornelia de Lange syndrome. He was placed in a class of pupils with profound and multiple learning difficulties with no functional speech and limited mobility. He is a wheelchair user and is able to reach for things and pull himself along the floor.

His class teacher and parent attended the training programme and accessed the follow up support programme.

What changes have occurred in the pupil's means, reasons and opportunities to communicate and demonstrate learning?

Means and reasons

Table 4.12 provides examples of this pupil's means and reasons to communicate before and after the introduction of the intervention. There is evidence from the data collected that this pupil has increased his use of pointing with and without facilitation. He can point to objects, photos/pictures and pictures with words in response to questions to make choices and express his likes and dislikes. He was only responding to objects previously. The teacher's extensive recording logs of choice making which are too detailed to be included here provide evidence of the pupil being able to do this. A brief example from the video data is provided to give a description of the types of activities the pupil engaged in and how his responses have changed from choosing objects to making choices from pictures with words.

> *The teacher presented a choice of pictures with word options on a touch screen using Clicker 4 software. She supported the pupil to touch the options by supporting his arm to touch/point to the options. The options were coffee, ovalteen, tea and juice. The teacher asked "what would you like today". The pupil responded by pressing coffee. The teacher says that she is not sure he has made the choice he wants and asks the pupil to choose again to make sure she understands what he is choosing. The*

teacher says "what are you looking? tea? If it's tea you want you need to press tea. The pupil presses the picture with word for tea.
The pupil is then presented with a storybook, which has been loaded into the computer and is given the option of pressing switches or touching the screen to turn the pages and listen to the text. He is given the opportunity to do this independently and does not respond. He is then physically supported to press either the switches or the screen to turn the pages and listen to the text. He responds when an adult physically supports his arm and verbally prompts him to respond to the on screen options. With physical and verbal promoting he touches the screen (not the switches) to moves to the next page and listen to the text.

EXAMPLES OF MEANS AND REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
MEANS	**BEFORE**	**AFTER**
Vocalisations, spoken words and phrases	• Laughs to indicate excitement/happiness[2] • Some sounds that appear to indicate agreement[v1] • Cries to indicate discomfort/distress[2]	• Squeals and giggles[2 4] as a happy response when excited • Groans when tired/agitated[3] or not getting what he wants[4] • Hums with fingers in ears to indicate he is really cross[4]
Facial expression, body movement, gesture and signing	• Smiles to show pleasure/enjoyment[1 2 v1] • Puts fingers in his ears[v1]	• Smiles to show pleasure/anticipation[3 4 v2] • Frowns and puts fingers in his ears to show displeasure (too noisy)[3 v2], drops bottom lip when he can't get what he wants[4] • Puts tongue under top lip and rolls eyes upwards to shut off/avoid engaging[3] • Goes floppy when tired[3 4 v2] or had enough[4] • Waves as a greeting[4] and a disengagement[3] • Pushes people when not want to be interrupted [4] and pushes/throws things away when he does not want them[3 4 v2] or wants more[4] • Turns head away, removes adult hand, puts fingers in ears to avoid engaging and end an interaction[3 4 v2] • Kicks/hits out to protest[3 4] • Reaches out to adults to invite play/interaction[3] and pull adults arm to gain attention[4]
Eye gaze, giving, pointing (with and without facilitation)	• Eye gaze to objects he wants to express likes[1 2 v1] • Reaches out for objects he wants[1 v1] • Can use his fingers to work a musical keyboard[2] • Photos were introduced but he did not appear to recognise or respond to them[1 v1]	• Eye gaze to objects he wants to express likes[3 4 v2] • Eye gaze to photographs of object he wants[3 v2] • Fleeting eye gaze to people talking to him[3 v2] • Reaches out to take objects he wants[3 v2] • Points to/touches pictures with words in computer programmes with facilitation to indicate what he wants (food, drink, activities)[3 v2]

TABLE 4.12: Examples of Pupil g's means and reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

The perceived reasons for this pupil to communicate and demonstrate learning are recorded in Table 4.11. There is general agreement that this pupil

has increased his response to questions, making choices and expressing his likes and dislikes.

EVIDENCE OF PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING BEFORE AND AFTER THE INTRODUCTION OF THE INTERVENTION		
TO MAKE THINGS HAPPEN	**BEFORE**	**AFTER**
Making a request	Yes[1]	
Asking for help		
Regulating/directing others		Yes[4]
Refusing or protesting	Yes[2v1]	Yes[3 4 v2]
Ending an interaction	Yes[v1]	Yes[3 4 v2]
TO EXPRESS THEMSELVES		
Express needs		Yes[3 4]
Express likes/dislikes	Yes[1 v1]	Yes[3 4 v2]
Express agreement (yes)		Not consistently[3]
Express disagreement (no)		Not consistently[3]
Express feelings	Yes[1 v1]	Yes[3 4 v2]
TO COMMENT ON THINGS		
Commenting		
Giving information		
Responding to questions (choices)	Yes[1 v1]	Yes[v2]
TO GAIN INFORMATION		
Ask questions		
FOR SOCIAL REASONS		
Greetings and farewells		Yes[3 4]
Getting attention		Yes[3 4]
Initiating starting interaction		Yes[3]
Apologising		
Joking or teasing		
Chatting		

TABLE 4.11: Evidence of pupil g's perceived reasons to communicate and demonstrate learning before and after the introduction of the intervention by data source (superscript)

Opportunities

Before the intervention this pupil was described as access to objects in some situations to provide him with the opportunity to make choices. He was beginning to have the opportunity to develop his recognition of photographs in specific activities with preferred toys. He also had access to switches (Big Mac) in some situations. He is reported to need further access to visual clues to support his understanding e.g. object of reference. It is not clear what communication relationships he had with adults[1].

After the introduction of the intervention this pupil has access to choice boards with photographs and a yes/no board. Choice options are presented as pictures with words on a touch screen computer and four in a line cheap talker. He has regular opportunities to choose break time snacks and drinks and answer questions in literacy based activities. He has established a communication relationship with his teacher and a care assistant who will take him to the to choose break and lunch time snacks. He has an individually tailored programme of work, which includes access to computer programmes that offer choices of food and drink and activities, which he can access through facilitation[3].

What are adults' perceptions of why these changes occurred?

The class teacher attributes changes in this pupils responses to his increased access to low and high-tech options particularly the use of computer software programmes such as Clicker 4. She feels here attitude towards pupils with profound and multiple learning difficulties has changed and she is now more open to the potential offered by facilitating pupil's to access low and high-tech aids and alleviate the physical barriers to communication.

How has AAC/FCT been used to support this pupil's access to communication aids and opportunities to demonstrate learning?

The use of facilitation has supported this pupil to control his movements in order to make choices on a wider range of low and high-tech options. It has helped him to initiate a movement and maintain his focus for longer periods of time[5]. His increased access to these options has provided him with more regular opportunities to express his likes and dislikes and make choices to that he can now choose from pictures with words as opposed to objects only[4].

What do adult's report as perceived changes in their knowledge, practice and attitudes changed?

One out of two people took part in structured interviews. The parent was not able to attend this part of the interview due to ill health.

The teacher has indicated that her knowledge of low-tech options had not increased but her use of these options had. Her knowledge and use of high-tech options and computer software to develop communication aids had increased

especially the user of Clicker 4 and Cheap Talkers. Her knowledge of computer software programmes to support communication had increased but she had not used these because she felt they were not appropriate this pupil. Her knowledge and use of strategies to overcome physical barriers to communication had increased along with her use of strategies to alleviate environmental factors, which included working more closely with parents.

The teacher's attitude and understanding of pupils with severe communication impairment had increased when her attitudes and beliefs had been challenged by "seeing what some adults who would initially appear as having profound and multiple difficulties can achieve through having access to communicate through AAC/FCT".

The teacher views pupils with severe communication impairment as having more potential and regards low and high-tech aids as offering more options. She has had reservations about using the strategies she has learnt in relation to adversely influencing the pupil's communication and other people's attitude toward what she was trying to do. She is concerned about convincing other teaching staff that this approach has validity.

The teacher reports that her practice has changed "immensely". She states that she is now acting on the knowledge that "some pupils have more potential to communicate better" and has become more "pro-active as the whole school communication co-ordinator". She attributes these changes to "meeting young people and adults who use AAC/FCT who were previously seen as not able".

What factors helped and/or hindered the introduction and implementation of the project?

The teacher took part in this element of the structured interviews, the parent was unable to attend. She reported that all aspects of the setting up of the project where helpful apart from not feeling able to comment on the use of the survey. She commented on the use of an action research model as being supportive of "not having expectations of getting it right straight away and being able to fail and reflect". She also commented on the positive aspect of parents being involved.

All aspect of the training were reported as helping factors apart from the difficulties experienced in releasing staff to attend due to "the cost of supply cover". She reported that it would have been more beneficial if more staff could have attended. The length of the training was viewed as a hindering factor in terms of staff release time but was also viewed as helpful due to it being 'excellent' and the time was felt to be necessary to cover the depth needed. The involvement of AAC and FCT users and facilitators was reported to be "the most powerful and essential part of the course to get people motivated and inspired". The discussions of theories and strategies; the emotional challenges and the least dangerous assumption were seen as "vital" elements of the training programme.

The implementation of the ideas and strategies that had been learnt was felt to be hindered by the structure of staffing/support in the school. There were difficulties related to staff changes and the need to have more staff trained.

The monitoring and follow up support programme to pupils and adults reported as being helpful especially the visits by the AAC/FCT trainer and researcher which were viewed as "essential" and need to be continued. The network meetings were also viewed as "excellent" to keep the project as a priority and swap ideas. Having the opportunity to be involved in the core group/steering group was reported to be "very important because people working every day need their voice heard".

What are adults' views on future provision and practice?

The teacher felt the project should be continued for pupils involved and would like to see it extended to include other pupils because she knows of more children who could benefit from being given increased options in AAC and FCT. Training in AAC/FCT was commented on as being "very important" due to the perceived "need to train as many staff as possible". She would like opportunities to increase and develop the knowledge she had gained including working with more experienced FCT users.

Sources of data

[1]Speech and Language Therapist pre-intervention assessment report

[2]School report for the AAC/FCT assessment June 2004

[v1]Video data, event sampling September - October 2004

[3]Interview with class teacher May 2005

[4]Interview with parent May 2005

[5]Report/updates from AAC/FCT trainer November 2004 – June 2005

[6]Researcher log October 2004 – June 2005

[v2]Video data, event sampling November 2004 – June 2005

ADDITIONAL INTERVIEW DATA

Interview responses in relation to all the pupils in school C.

One (head teacher) out of three people took part in a structured interview. There were no returns to the questionnaire from deputy head and speech and language therapist.

What factors helped and/or hindered the introduction and implementation of the project?

The teacher head teacher reported that all aspects of the setting up of the project had been helpful, although it had been difficult when one of the pupils was not necessarily in the most conducive setting. He stated that it was difficult to find supply cover to release the number of adults involved in the training. He would rather pay people to attend training at the weekends than have them out of school. The lack of funding for supply cover was also viewed as a hindering factor. The implementation of the ideas and strategies that had been learnt was felt to be hindered by the structure of staffing/support in the school. He commented that the more confident the teacher the more likely it is that they will see how to use the support of experienced teaching assistants.

The head teacher viewed the monitoring and follow up support programme to pupils and adults as helpful and felt that it would be particularly important to maintain the steering group and keep communication issues as a high priority. He commented that the project had been hindered by the "sea of initiatives" that are being introduced to schools, and whilst he views communication as fundamental it had become less of a priority in relation to, for example, physical handling. He also commented on the lack of local and national training for teaching staff working with pupils with severe learning difficulties.

What are adults' views on future provision and practice?

The head teacher felt the project should be continued for the pupils involved and would like to see it carefully extended to include other pupils because he feels that every child should be getting more access to AAC in particular and there are up to forty pupils with profound and multiple difficulties in the school, some of whom may have the potential to benefit from FCT. He would

like to be personally involved in future training because he feels it is essential for him and the staff to increase and develop their knowledge in this area

VIII. ACROSS CASE STUDY RESULTS

a. Pupil Outcomes

A summary of the changes were reported and evidenced to have occurred in each pupil's means, reasons and opportunities to communicate and demonstrate learning and the adult's perceptions of why these changes occurred are presented in Table 4.14.

SUMMARY OF PUPIL CHANGES AND PERCEIVED REASONS

PUPIL AND SCHOOL	PUPIL CHANGES	PERCEIVED REASONS FOR CHANGES
Pupil a School A	• Increased vocabulary and more willingness to use spoken words • Increased pointing with facilitation to letters and typed words on the light writer • Increased expression of his needs, likes/dislikes and responding to questions related to making choices • Increased opportunities to make choices on high-tech options (computer, light writer)	• The pupil is more willing to communicate and ask for things • The teaching assistants are constantly talking to him and commenting on everything he does • The parent/carer's increased awareness of his needs due to the education they received as part of the AAC/FCT project, which led to them changing their approach to offer more choices • The network of support opened up by FCT contributed towards changes in everyone's practice
Pupil b School B	• Increased typing with facilitation, words and sentences which are more functional than his spoken language • Increased on task behaviour when facilitated • Increased expression of needs; likes and dislikes; responding to questions related to making choices; commenting and giving information • Increased opportunities to make choices on low and high-tech options (computer, light writer)	• The pupil maturing • The pupil getting to know new staff in a new school • The pupil having access to typing with facilitation (including access to low and high-tech communication options) • The staff team being open and willing to explore what works • The adults adopting the least dangerous assumption
Pupil c School B	• Increased use of spoken language • Reduced use of Makaton signs • Increased use of speech for a wide range of reasons including respond making requests, asking questions and occasionally comment on things	• The pupil maturing • The pupil getting to know new staff in a new school • The pupil having access to typing with facilitation
Pupil d School C	• Increased use of pointing to more symbols, symbols with words, words and letters with and without facilitation • Increased expression of agreement (yes); disagreement (no); likes and dislikes and responses to questions related to activities and feelings. • Increased consistency and accuracy	• The teaching assistants attendance on the AAC/FCT training course led her to think about more strategies to enable pupils to make choices • The teaching assistant shared what she had learnt which led to more strategies being introduced in the classroom

	in choice making • Increased opportunities to make choices on a range of low-tech aids	• The pupil had more opportunities to make choices by pointing to Makaton symbols with words on low-tech aids • The use of physical prompts supported the pupil's ability to access the aids
Pupil f School C	• Increased use of pointing to objects, pictures, pictures with words, symbols with words, words, letters and sentences with facilitation • Increased concentration and attention on facilitated reading and spelling activities • Increased demonstration of reading and spelling ability • Increased expression of likes and dislikes; response to questions and making choices on high-tech options (computer) • Increased opportunities demonstrate his learning and make choices using high-tech options	• Access to a good routine • Knowing what is expected of him • The discipline of FCT
Pupil g School C	• Increased use of pointing/reaching out to objects, photos/pictures with words with and without facilitation • Increased expression of likes and dislikes; response to questions and making choices • Increased opportunities to make choices using low and high-tech options	• The teachers changed attitude towards pupils with profound and multiple learning difficulties • The teacher being more open to the potential of facilitating a pupil to access communication options • The teacher's increased use of low and high-tech options

TABLE 4.14 Summary of pupil changes and perceived reasons

There is evidence of changes for all pupils. At least five of the pupils have increased their means to communicate through increased use of pointing and/or typing with or without physical support. All are reported to have increased their reasons to communicate including expressing their needs, likes and dislikes and responding to questions in order to make choices. At least two have increased their communication and demonstration of learning through increased use of speech. Five have had increased opportunities to use low and/or high tech options.

Some adults attribute the changes in the pupil's communication and demonstration of learning to within child factors such as the pupil's willingness to ask for things or the pupil's maturity. Changes in adults' practice that are perceived to have contributing towards the changes in the pupils' communication and demonstration of learning include changing the way the pupil is talked to; offering more choices; providing increased access to low and high-tech options and the

pupil having access to physical support and facilitation. Changes in adults' attitudes are also referred to in relation to at least three pupils. Additional evidence for changes in attitudes is also presented below.

b. Adult Outcomes

There were 15 out of a possible 23 returns, which is a 65.2 per cent response rate. Appendix 8 details the numbers of responses in relation to each pupil and the totals for each question.

The majority of adults reported that their knowledge, use and practice of low and high-tech options, computer software to develop communication aids and support pupils in their communication/demonstration of learning had increased. Where changes had not occurred this was attributed to the adult already knowing about or using the equipment or strategies.

All but one respondent had increased their knowledge of physical barriers to communication and their use of strategies to alleviate these. One teacher had not attended the training and another had not been involved in facilitating the pupil. The majority reported their knowledge of environmental barriers to communication (11) and their use of strategies (12) to overcome these had increased. Where changes had not occurred this was attributed to the adult already knowing about or using the equipment or strategies.

All but one stated that their attitude and/or understanding of pupils with severe communication impairment had changed. The majority (11) viewed these pupils as having more potential than they had previously thought. Those who did not view the pupil as having more potential reported that they already held a positive view of these pupils potential. The majority (13) viewed low and high-tech aids as providing more options for pupils than they did previously.

The majority (12) did have reservations about using the strategies they had learnt about. Five were concerned about their own confidence; eleven were concerned about adversely influencing a person's communication; five were concerned about the physical touch required to implement FCT; four were concerned about the consequences of offering more options/choices to the pupil and seven were concerned about other people's attitude towards what they were

trying to do. One additional reservation related to concerns about the lack of confidence of school staff in facilitation.

All but one reported that their practice had changed over the last six months. These changes included the following:

- Not assuming lack of intelligence
- Offering the pupil choices
- Using a running commentary
- Giving physical support and facilitation
- More commitment to finding strategies to give all children some form of communication
- Applying ideas to other pupils, especially low-tech options
- Assuming understanding – adopting the least dangerous assumption
- Involving the pupil in decision making
- Willingness to try different things
- Increased confidence - I don't worry if I make a mistake
- Using more low-tech aids especially yes/no options
- Acting on the knowledge that some pupils have more potential to communicate better
- Being more pro-active as the whole school communication co-ordinator

The following were reported to have influenced these reported changes in practice:

- Understanding that functional levels are different and to be realistic about what he can achieve
- The AAC/FCT training
- The AAC/FCT training and realisation that there is more out there to develop practice
- Thinking on a wider scale
- Realising what you see is not what you get – the physical presentation of a person does not give you the whole picture
- The AAC/FCT training that included meeting people who use AAC/FCT and who are survivors of the system

- Seeing the pupil respond to questions and demonstrate what he knows
- Realising the 'potential' I can give to pupils
- Increased awareness of communication in general
- Positive attitudes from parents and colleagues
- Trying out ideas and finding they worked
- Being new to teaching in a special school.
- Meeting young people and adults who use AAC/FCT who were previously seen as not able

Results of self report rating scales of adults' knowledge, use and attitudes towards AAC and FCT

Adults completed rating scales prior to the training, at the end of the training and 6 months after the training in relation to their knowledge, use and experience of AAC and FCT. An analysis of self report rating scales of adults knowledge, use and attitudes towards AAC and FCT administered prior to the training, at the end of the training and 6 months after the training is also presented as evidence to be considered in relation to adult outcomes.

T-tests for non-independent (matched samples) were used to compare the paired ratings of 18 adults before the training and immediately afterwards. This test was used as it was assumed that there was a normal distribution due to the wide range of adults participating in the training (parent, teachers, teaching assistants and experienced support teachers). The direction of difference before and after the training was not predicted in advance so a one-tailed or directional test was used.

The ratings over all the categories were compared for pre and post training responses and a t score of 0.592 indicated that at a 0.5 confidence level the combined ratings of attitudes, knowledge and use of AAC and FCT had significantly changed.

The ratings related to each category were analysed and the results are presented in Table 4.15. There was a statistically significant change in adults' knowledge, use and attitudes towards AAC and FCT immediately after the training. The least amount of change related to attitudes towards AAC.

Test focus	Degrees of freedom	Mean x - y	Paired t value	Probability (2-tail)
AAC knowledge pre (x) and post (y) training	17	1.5	t = 5.80	0.000
AAC experience pre and post training	17	2.11	t = 6.77	0.000
AAC attitudes pre (x) and post (y) training	17	0.611	t = 2.17	0.045
FCT knowledge pre (x) and post (y) training	17	1.78	t = 6.77	0.000
FCT experience pre (x) and post (y) training	17	0.778	t = 4.08	0.001
FCT attitudes pre (x) and post (y) training	17	1.06	t = 7.01	0.000
Total ratings pre (x) and post (y) training on all 6 categories	5	18.3	t = 4.70	0.005

TABLE 4.15 Results of two-group paired t-tests on adults' ratings of their knowledge, use and experience pre and post training

Would adults' ratings immediately after the training be any different six months later? The results of t-tests shown in Table 4.16 Indicate that a sample of ten adults' ratings had not significantly changed after 6 months.

Test focus	Degrees of freedom	Mean x - y	Paired t value	Probability (2 tail)
AAC knowledge post training (x) and 6months after (y)	9	0.1	t = 0.429	0.678
AAC experience post training (x) and 6 months after (y)	9	-2.6	t = 1.18	0.268
AAC attitudes post training (x) and 6 months after (y)	9	-0.2	t = 0.802	0.443
FCT knowledge post training (x) and 6 months after (y)	9	0.3	t = 1.15	0.279
FCT experience post training (x) and 6 months after (y)	9	0.7	t = 1.91	0.089
FCT attitudes post training (x) and 6 months after (y)	9	1.5	t = 1.00	0.343
Total ratings post training (x) and 6 months after (y) on all 6 categories	9	0.3	t = 0.276	0.789

TABLE 4.16 Results of two-group paired t-tests on adults' ratings of their knowledge, use and experience post training and 6 months later

c. Process Outcomes

There were 18 out of a possible 31 returns, which is a 58 per cent response rate. Appendix 9 details the numbers of responses in relation to each pupil and the totals for each question.

All the factors related to setting up the project were viewed as either helpful or the respondents did not know or feel able to comment. The factors that were commented on as being particularly helpful include:

- The provision of funding for the training and support programme

- The use of an action research model
- Sharing of information with other support services/agencies
- Initial AAC/FCT assessments of pupils by the AAC/FCT trainer
- Parents being involved and consulted from the beginning of the project

A head teacher identified one additional hindering factor as pupils not necessarily being in the most conducive class setting.

Thirteen people commented on factors related to the six-day training programme. Five had not attended the training but the two school managers were asked to comment on the amount of time the training lasted and the lack of funding for staff cover.

The majority of respondents were positive about the range and number of people who took attended (13) and delivered the training (11 - 12). The involvement of AAC users, FCT users and experienced facilitators were commented on as being of particular value. Hindering factors included some adults only being able to attend some parts of the training (6); the amount of time the training lasted (7) and the lack of funding for school staff to be released (12).

Most respondents viewed the majority of the content and delivery of the training positively. One person felt that the joint planning of activities/programmes for pupils had been helpful in being able to share ideas but this was also hindered by the ideas not being implemented in school. One person felt the use of power point presentations had hindered the delivery of the training because one presenter had a tendency to stand in front of the screen. Additional helping factors was reported to be the use of the video of "Annie's Coming Out" which is film dramatisation of Rosemary Crossley's work with Anne MacDonald. Those who did not comment or did not know if a session had been helpful or not had generally not been able to attend those particular sessions. Several comments were made about the particular relevance of some aspects of the training as being essential, inspirational and/or vital these included:

- The involvement of AAC and FCT users
- The involvement of experienced facilitators

- The discussions about theories and strategies and the emotional challenges
- The least dangerous assumption

Hindering factors related to the implementation of the ideas and strategies included the structure/timetable of the day (7); structures of staffing/support in schools (9) and the provision and use of equipment (3) and software (6). Additional hindering factors were identified as the pupil being unwilling to engage (2) or the pupil only being willing to work with a few members of the teaching staff (1). All respondents felt that trying out new strategies/implementing ideas and sharing their learning with others had been helping factors.

The majority of respondents reported that most of the factors relating to the monitoring and follow up support to pupils and adults were helpful. Several commented on the visits to school/home by the AAC/FCT trainer and researcher and the use of videos to share information about pupils progress. Two reported that support from the LEA support service had not helped because they had not been actively involved with them. Two reported that the network meetings had not been helpful because they had not had the time to attend and nine did not comment or know if this had helped or hindered. Three reported the steering group as being helpful the majority (15) did not comment or know if this had helped and/or hindered. An additional helping factor was identified as having confident and creative members of staff who are willing to try out new ideas (1). Additional hindering factors were identified as being the "sea of other initiatives" being introduced to schools (1); the lack of general training programmes for teachers working with pupils with severe learning difficulties in special schools (1) and the infrequent visits by the AAC/FCT trainer and researcher (1).

d. Views on future provision and practice

Of the 18 respondents 15 wanted the project to continue for pupils already involved in the project. Three were not sure about continuing one pupil's involvement due to the pupil not responding to using communication aids in school. All respondents wanted the project to be extended to include other pupils (the SENCO did not want to extend until staff had time to consolidate what they had

learnt). The majority (16) knew of other pupils who they thought would benefit form being given increased access to AAC. Many (12) knew of other pupils they thought would benefit from FCT. All felt that more adults should be given the opportunity to be trained in AAC and FCT. All but one expressed a desire to maintain/increase their knowledge and experience of AAC and FCT. There were many comments about the need for additional training.

5. DISCUSSION

This study investigated how FCT could be introduced within the local authority in order to enhance the communication of young people with severe communication impairments who had been identified as not having had access to the means of reaching their communication potential. This discussion will consider the effectiveness of using an action research model. The results of the case studies relating to changes in pupils communication and demonstration of learning will be reviewed. The findings will be considered in relation to theories that appear to have the most potential in describing and explaining how and why FCT can provide support to pupils with severe communication impairments. Theories of teaching and learning will be considered in an attempt to explain the social processes involved in facilitation. The outcomes for adults and will be reviewed to consider why there was such a positive change in their practices and attitudes. Issues of reliability and validity will be reviewed followed by a consideration of the implications for future practice and research.

A. Effectiveness of Action Research Process

The essential elements of collaborative action research as defined by Oja and Smulyan (1989) were present throughout the project. The importance of building positive relationships and commitment was one of the most frequent themes of the activities undertaken. There is evidence of discussions, negotiations, explorations of opportunities, assessments of possibilities and examinations of constraints (Kemmis 1985) taking place on a regular basis.

The researcher and participants did agree common goals and mutually planned the research design. There was frequent and open communication with the stakeholders and participants. Conflicting perceptions and assumptions resulting from different positions and roles (Oja and Smulyan1989) did exist between the AAC/FCT trainer, the researcher and some of the speech and language therapists. For example the process for sharing the AAC/FCT trainer's reports involved negotiating the content with the speech and language therapists to address concerns about accuracy of reporting and difference in the use of language. Although one speech and language therapist was very involved in the

core group and supporting activities, additional networking with individual speech and language therapists may have alleviated some of the tensions. Some of the speech therapists held a different view of the pupils' potential to benefit from being included in the project and continued to challenge the reports and findings of the AAC/FCT trainer and researcher. The focus on communication was extended to use the term 'communication and demonstration of learning' to describe what was being taught and measured. This appeared to move the focus more towards that of teaching and learning. Also the introduction of the term 'mediated learning' (Vygotsky 1978) appeared to help reframe the activities into more of a teaching than communication strategy. This would be helpful to adopt early on in any other work in this area and will discussed in more detail later.

There is evidence of democratic leadership in terms of developing mutual understanding and consensus and sharing power and responsibility. For example, the process of selecting the pilot group of pupils was commented upon by one of the participants of the core group as being a "really useful discussion" because it had acknowledged the differences in perspectives and views of the people in the core group.

The presence of core and sub-cycles of planning, acting, observing and reflecting supported the flexibility to change and respond to differing contexts and circumstances (Uzzel 2000). This was an essential part of the process and began at a very early stage when the whole project structure was changed largely due to the alternative view of the speech and language therapist who argued that the project should be based on establishing if there was a 'need' for an alternative intervention. The core group accepted this view and the project followed a very different route as a result. Also consultation with school managers, staff and the AAC/FCT trainer led to changes in the pilot group of pupils. It is interesting to consider Kemmis and McTaggart's (1992) notion of reflection in which they suggest changes should include the language being used. There are some examples of changes in language, for example, 'aspirations' to 'goals'; 'you need' to 'we need'; 'communication' to 'communication and demonstration of learning' and perhaps most significantly 'facilitation' to 'mediated learning'. Kemmis and

McTaggart argue that there should be a more coherent discourse about the topic being studied. This will be returned to later in the discussion.

Evidence for the broad aim of bringing about practical improvement, innovation, change or development of practice and practitioners better understanding of their practices (Zuber-Skerritt 1996) is provided by the fact that the majority of adults reported that their knowledge, practice, understanding and attitudes had changed. Several adult participants commented that their previous practice and beliefs had been challenged particularly in relation to their view about the potential of pupils with severe communication impairment. This provides evidence for maximising social justice by requiring participants to question and challenge value systems and beliefs (Grundy 1987).

It could also be argued that the aims of staff development, improved school practice and modification and elaboration of theories of teaching and learning (Oja and Smulyan (1989) have been achieved to some degree. It would be fair to assert that staff development has been achieved and that the process has begun to extend this, which in turn should lead to changes in school practice. It would be difficult to assert changes in school practice at this stage but the potential is there. There is even the potential to change the culture of groups or institutions and societies (Kemmis and McTaggart 1992) in the much longer term with plans having been agreed to implement joint training between two of the schools in order to provide more staff and pupils access to AAC/FCT. Also the proposal to develop a joint research facility (involving the LEA and Nottingham Trent University) to focus on issues around developing research and practice in the areas of communication and inclusion has been accepted by Nottingham Trent University and is being discussed by school and LEA managers. The initial reactions to this proposal have been very positive. The elaboration of theories of teaching and learning will be returned to later in the discussion.

In conclusion the action research process supported the exploration of this research question.

B. Findings from Case Studies

Collective instrumental case studies (Stake 2000) were used to evaluate the outcomes for the pilot pupils and the adults who were supporting them. This complemented the action research process because it was flexible and interactive (Robson 2000). The opportunity to observe "real effects in real contexts" (Cohen et al 2000: 181) contributed towards the researcher's growing knowledge and understanding of the processes being observed in the introduction of AAC/FCT. When considering the outcomes it is important to understand what might be happening for each individual pupil so as not to loose sight of the intrinsic element of case studies (Stake 2000) and to focus on the most significant aspects of the phenomenon (Yin 1994). Yin (1994) suggests that the most significant aspect is usually related to what is completely new or different.

There is evidence that at least five pupils had increased opportunities to use low and/or high tech options; all six increased their reasons to communicate and demonstrate learning; at least two increased their use of speech; and at least five increased their means to communicate through increased use of pointing and/or typing with or without facilitation. So what led to these changes occurring?

An explanation for an increase in pupils' opportunities can be attributed to the fact that all but one adult reported that their practice had changed over the last six months with the majority reporting increased use of low and high-tech options and computer software. An explanation for an increase the pupils' reasons to communicate in terms of expressing needs, likes and dislikes and responding to questions in order to make choices can also be attributed to the changes in adult practice because logically, if the pupil is given more options to make these responses then his reasons to communicate will increase. What is unique is the extent to which adult practice changed and the potential reasons for such a conclusive result will be considered after the discussion of outcomes for the pupils.

Whilst it is really positive to have evidence of changes taking place in these areas there is potentially nothing new or unique about this type of practice because access to these communication aids should be routine. What was new and different was the introduction of FCT. In this study it is the use of FCT, which is the

significant aspect of the phenomenon (Yin 1994). Hence the key questions that need to be considered are in what way and to what extent did FCT contribute towards changes in pupils' ability to communicate and demonstrate learning? Can a consideration of these questions inform decisions about how other pupils might benefit from being supported by FCT in the future?

I. What changes did FCT support?

It needs to be considered that this evaluation occurred only six months after the initial training. This is a very short space of time for significant changes to have occurred. Some pupils had limited access to FCT and had not had consistent, regular access to high-tech communication aids. The changes that occurred for each pupil will be reviewed to consider how FCT helped pupil's manage specific difficulties.

Pupil a increased his pointing with facilitation to letters and typed words on a light writer. This was mainly at home where he was typing an initial letter to make a choice and some single words of choices he had made verbally. He did not respond well to pointing to symbols with words or yes/no boards with or without facilitation. His level of engagement was variable and he had gone through several changes of teaching assistants in school. His behaviour had been causing high levels of concern at the beginning of the project to the point where both the researcher and AAC/FCT trainer were seriously considering whether this pupil was going to be able to benefit from FCT at this point in time. He had significant sensory difficulties that were affecting his ability to access education. However, after six months his teaching staff and parents were reporting increased use of speech and a much calmer, more relaxed pupil. They attributed this to the changes in the way they talked to him and the increased number of choices he was being offered. It was not until the final home visit that he actively engaged and typed a sentence with facilitation. It is clear that he has the ability to benefit from FCT and whilst he can use single spoken words in a functional way he cannot speak a sentence. It is very early days for this pupil but it appears that facilitation can help him to manage his difficulties with perseveration, impulsivity and proprioception.

Pupil b has demonstrated significant changes in his ability to communicate and demonstrate learning. He types sentences on a regular basis with facilitation. His typing is more functional and at a higher level than his speech. He has had regular access to FCT at home. His access in school has been less regular and consistent. Facilitation has helped him to manage difficulties with low tone, impulsivity, initiation, hand-eye co-ordination, concentration and attention to task.

Pupil c has not demonstrated any significant changes in being able to point or type with facilitation. He was typing regularly before the project and appears to need less support to access his communication aid. When he has had access to facilitation it has helped him to manage his difficulties with impulsivity and attention to task.

Pupil d has demonstrated significant changes in being able to point with and without facilitation to more symbols with words, words and letters. He can consistently and accurately make choices. He has had increased opportunities to do this particularly in relation to expressing agreement and disagreement, which was described as inconsistent and unreliable before the project. He has regular and consistent access to these aids with and without facilitation at school. Facilitation has mainly been used to support him when pointing to unfamiliar items. It has helped him to manage difficulties with impulsivity, attention to task and unclear hand dominance.

Pupil f has demonstrated significant changes in being able to point with facilitation to a range of items including words and letters. He can type words and sentences and has demonstrated understanding and literacy skills, which had previously been unknown. He has had regular access to FCT at school and increased access to literacy based computer activities. Facilitation has helped him to manage difficulties with isolating his index finger, initiation, hand-eye co-ordination, visual disinhibition and concentration and attention to the task.

Pupil g has demonstrated some changes in being able to extend his pointing from objects only to pictures and pictures with words with and without facilitation. He has regular access to FCT in school and increased access to low and high-tech options. Facilitation has helped him to manage difficulties with controlling his

movements (hand eye co-ordination, fluctuating tone, unclear hand dominance, index finger isolation) initiation, auditory disinhibition, focusing and attending to task.

It appears that all of the pupils have benefited from facilitation to different degrees but before considering the extent to which they have benefited from FCT, the way in which they have been supported will be considered in relation to the current theories in an attempt to understand and explain why FCT may have contributed to these outcomes.

II. Can Current Theories Explain Why FCT was Supportive?

Neuromotor difficulties including hand eye-coordination (pupils b, f and g), isolation of the index finger (pupils f and g), unclear hand dominance (pupils d and g), fluctuating tone and low tone (pupils g and b) have been supported by FCT. This provides support for the theory that FCT helps pupils to manage neuromotor difficulties. The finding that many pupils with autism are believed to have undiagnosed difficulties with movement (Fulkerson & Freeman 1980, Maurer & Damasio 1982, Jones & Prior 1985) explains why pupils with autism also benefit from FCT. However, defining FCT as simply providing physical supports to access communication aids leads to a simplified view of the complex processes that appear to be supported by facilitation. FCT is more than a strategy to help support pupils manage neuromotor impairments.

Sensory and perceptual difficulties (Bogdashina 2003) including proprioception (pupil a) and tactile defensiveness (pupil f) were supported by FCT. This provides some support for the theory that FCT helps to support pupils with sensory and perceptual difficulties.

Executive functioning difficulties (Hughes et al 2004) including visual disinhibition (pupil f), perseveration (pupil a), impulsivity (pupils a, b, c and d) and movement planning/initiation (pupils b and f) were supported by FCT. This provides support for the theory that FCT helps pupils with executive functioning difficulties especially in relation to disinhibition and planning. The fact that pupils with autism have been found to have significant impairments in their executive functions (Joseph et al 2004) provides a credible theory for why pupils with autism in

particular can benefit from FCT. It would also be worth considering to what extent the facilitators verbal prompting and the use of voice output devices support the pupils' possible deficits with working memory.

Specific movement differences (Donnellan and Leary 1995) such as starting (initiation) and stopping (perseveration) were supported by facilitation and have been classed above as executive functions. Additional movement differences (switching, executing and combining) are not specifically reported on but this does not necessarily mean they were not present. More detailed analysis of the data might be needed to establish what instances of these behaviour difficulties might look like so that they can be more accurately observed.

These theories do provide some theoretical basis for explaining why FCT makes a difference to some pupils. Having considered what changes FCT supported and some of the possible reasons why FCT has helped it is important to review the extent to which this support has been effective.

III. To what extent was FCT supportive?

The extent to which FCT supported pupils' means of communicating and demonstrating learning was variable. For pupil c it helped to slow him down and concentrate but there appeared to be no other significant gains at this point in time. Pupil a was only just beginning to accept facilitation to type and whilst he had demonstrated the ability to benefit from FCT it had not, as yet, had a significant impact on his routine means to communicate. These results could be explained by the limited access these pupils had to facilitation, especially pupil c who had no routine access either at home or school. Pupil b had access to facilitation at home but it was not being routinely used in school. It could also be hypothesised that because both of these pupils increased their use of spoken language their need for FCT as an augmentative means of communication had lessened. This argument could be further supported by the finding that pupils with autism with less language impairment (Joseph 2003) have less impairments in their executive functioning and therefore would have less of a need for facilitation than those with more severe language impairments. It is far too early to say whether this is the case and ongoing monitoring of how these pupils access their communication aids will be

important in establishing the extent to which FCT will be helpful to them in the future.

The extent to which FCT has made a difference to pupil g's means of communicating is more evident due to the increased daily access he has to FCT as part of a routine of choice making. His access to a visual display on a computer has supported his motivation to engage. It is interesting to note that a medical website detailing Cornelia de Lange syndrome recommends early intervention for psychomotor delay which should include access to computer programs that uses visual memory (which is more beneficial than standard methods of verbal instruction); perceptual organizational tasks and tactile stimulation during indirection (reported to help memory and performance). It is possible that the tactile stimulation provided by FCT is also making a difference to this pupil's ability to respond.

The extent to which FCT has made a difference for pupils' b, d and e is perhaps one of the most unique and interesting findings. All of these pupils have autism and very restricted functional speech and yet they are all showing more ability to communicate and demonstrate learning through pointing and typing with facilitation than they were previously thought to be capable of. The demonstration of unexpected language and literacy skills by two of these pupils is also a unique finding. They have all had regular access to FCT either at home or school. Their increase in on task behaviour is significant and has considerable implications. If FCT can make such a difference to engagement should it be considered as an everyday teaching strategy for enhancing the teaching and learning for pupils with autism and severe language impairment?

The differences in the extent to which FCT has been supportive could be explained by the amount of access to FCT and/or the severity of impairments associated with neuromotor difficulties, movement differences, sensory and perceptual problems and executive functioning experienced by the pupils.

However there is a sense that there is more to be understood about the processes involved in FCT than remediating within child deficits. There is a social element to what is taking place in the relationship between the pupil and the

facilitator. The reports from users of FCT that they benefit from the emotional support provided by the facilitator, which includes having access to someone who assumes their intelligence, are indications that there is more to be explained than the theories identified can account for. Why is it for example that two of the pupils would not accept facilitation by some people but would from others? The analogy of facilitation being like playing a duet or dancing together (Marcus and Shevin 1997, Caroline McLeish 2005 personal communication) suggests that the facilitator needs to provide support for the emotional and social (relationship) aspects involved in communicating and demonstrating learning. Throughout this project the researcher has been increasingly drawn towards the theories of Vygotsky because they appear to explain the teaching and learning processes involved in FCT. The fact that communication is a two way process that takes place within a given context is not addressed by the theories discussed so far. Daniels (2005) recognises this as an omission in many psychological theories applied to teaching and learning situations stating: "context, however defined, remains under-theorised and its effect remain under-researched" (Daniels 2005: 7). Can Vygotsky's theories of teaching and learning support our understanding of FCT?

IV. Vygotsky – The Missing Link?

Vygotsky (1978) introduced the concept of mediation and emphasised the role of adult assistance and guidance in enabling a child to do in collaboration, with more expert others, what he or she was not able to do alone. He describes the zone of proximal development, the potential for a child to learn, as being created in the interaction that occurs between the adult and the child. He highlights the reciprocity that takes place when participants adjust their manner of participation to take account of each others' current knowledge and skills in carrying out an activity and the transformation of their potential to participate that takes place in the process (Wells 1999). The analogy of learning to dance used by Wells (1999) resonates with the descriptions of experienced facilitators:

"In learning to dance the newcomer is joining an ongoing community of practice ...To begin, the novice takes the first faltering steps, he or she is carried along by the rhythm of the music and guided by the movements of the dancing partner.

Before long however, the novice begins to get a feel for the dance and is soon able to participate on equal terms … the novice gradually constructs the organising cognitive structures for him or herself and brings his or her actions into conformity with the culture given pattern …" (Wells 1999).

The interactions that occur between teacher and pupil or in this case facilitator and user involves much more than cognition. All aspects of the learner are viewed as being involved (acting, thinking, feeling). The role of the teacher/facilitator then is to identify the meditation the pupil needs to demonstrate their potential and create a situation for the interactions in which learning can take place. Learning will be more successful "when it is meditated by interaction that expresses mutual respect, trust and concern" (Wells 1999). This applies so well to what FCT users say they need from facilitators: belief in their capacity to respond, assumptions of intelligence, emotional engagement (Mukhopadhyay 2003, Fihe and Kochmeister in Gillingham and McClennen 2003).

Vygotsky (1978) also refers to artefacts – the tools that are available at a particular time to support the learning interaction between the adult and the child. These mediational means (Daniels, 2001) can include tools such as writing, speaking and gesture and in the case of FCT would be represented by support to point to appropriate communication aids. The mediational actions would be the type and amount of physical and emotional support the facilitator provides to help the pupil overcome the neuromotor, sensory and perceptual, movement and cognitive (executive functioning) barriers to their engagement.

V. Implications for Future Discourse and Practice

The implications for teaching of adopting a Vygotskian approach are described by Daniels (2005): "teaching and assessment should be focused on the potential of the learner rather than a demonstrated level of achievement … teaching or instruction should create the possibilities for development through the kind of active participation that characterises collaboration … it should be socially negotiated and it should entail transfer of control to the learner" (Daniels 2005:15).

The use of this terminology to explain and support teachers and facilitators and users about the importance of context, mediation and relationships could be a

helpful way forward in reframing the discourse used to explain FCT. As Kemmis and McTaggart (1992) point out a new discourse has the potential to disassociate participants from previous activities some of which may have been negative. It is particularly important to find a discourse that explains FCT and disassociates it from the overwhelming negative press it has received.

The implications for extending this project include the need to not only consider within child deficits but also the willingness and capacity of adults to engage in relationships that promote teaching and learning through mediation and collaboration.

Having considered the outcomes for pupils and the theories than can be used to explain the processes involved it is necessary to return to the other unique outcome: the changes in adults' knowledge, experience and practice.

C. Positive Adult Outcomes

The significant changes in adults' knowledge, practice and attitudes has been a very positive result especially due to the fact that adults had begun implementing ideas and strategies that had been suggested by others in the past. Not only did adults' use of strategies increase but the majority also reported a change in attitude and understanding. They viewed pupils with severe communication impairment as having more potential than they did previously. They also viewed low and high-tech aids as providing more options for enabling pupils to realise their potential than they did previously. What enabled them to change their views to this extent? The content and delivery methods employed in the training were clearly viewed as supportive and beneficial to participants' learning particularly the involvement of AAC and FCT users, experienced facilitators and the use of open discussions about theories of teaching and learning, the emotional challenges of introducing FCT and the least dangerous assumption. The broad range of adults attending (educational psychologists, parents, teaching assistants, teachers, facilitators, personal assistants, university students) was also viewed as supportive perhaps because it helped to establish a climate of mutual learning.

Feedback received immediately after a training event is often positive, however the data shows that the changes reported at the end of the training were

maintained with there being no significant changes on the adult rating scales used after six months. This can partly be explained by the follow up visits to schools and homes, which were viewed as helping by the majority of participants. Another possible explanation is that the project contained many of the factors outlined in the guidelines produced by Georgiades and Phillimore (1975). They present evidence that traditional forms of training where an innovation is taught to teachers who are then expected to go back into their organisations and effect change as being "totally ineffectual" stating: "the fact of the matter being that organisations such as schools ... will like dragons, eat hero innovators for breakfast" (Georgiades and Phillimore 1975). They assert that organisations cannot be changed by changing individuals without regard to the social systems of the organisations. They recommend that any training initiative should focus on the following:

- Working with the forces within the organisation which are supportive of change
- Not allowing individuals to become isolated, protecting people by arranging for paired and small group opportunities for mutual learning
- Locating key people within the organisation who can be worked with
- Working with the healthy parts of the system where there is a will and the resources to improve
- Ensuring commitment and involvement of the top management of the organisation

The use of an action research model enabled the factors above to be implemented, all school managers had agreed to take part, all the participants of the training were voluntary, there were key people in some of the schools who were able to actively support developments due to their role and status and the follow up visits and network meetings allowed for paired and small group learning opportunities and mutual sharing. There was one school where it had been hard to support some isolated individuals and this is where the one person who said their practice had not changed was working.

Many of the responses to the factors relating to implementation of the project are not particularly unique or interesting, for example the majority highlighted lack

of funding for staff cover while they attended the training as a hindering factor. However the structure of staffing and support in schools was seen as a hindrance as were the issues of accessing equipment and software. These were often organisational factors in the schools caused by lack of technical knowledge and differences in opinion about whether FCT was a discreet one-to one activity or something that runs through the whole day. Many of these issues were addressed by the follow up support programme but any further training needs to emphasise that AAC/FCT is not a discreet activity. Also the need to provide training that is accessible either through providing funding for staff release or developing a way of providing the training does not put such a strain on the school.

Of particular interest were the adults' responses to reservations about implementing the strategies they had learnt which included:

- Lack of confidence in being able to facilitate (5)
- The potential to adversely influence a pupils communication (11)
- The physical contact required to implement FCT (5)
- The consequences of offering more choices to pupils
- Other people's attitudes towards what they were trying to do (7)

Whilst all of these reservations could be considered individually, the unique issue to address is that they relate to the adults' concerns about their ability to provide this type of support in the historical and socio-cultural context within which they work. What theories exist to explain this contextual element? Activity theory (which has its roots in Vygotskian psychology) has the potential to explain the human activity involved in this project. In this model Vygotskian concepts are extended to include the rules, community and division of labour within the culture and institution. "It is a socio-cultural approach with the goal being to explicate the relationships between human mental functioning, on the one hand, and the cultural, institutional and historical situation in which this functioning occurs, on the other" (Wertsch et al 1995: 3). Activity theory is "particularly strong in emphasising the importance of historicity when seeking to understand how practices have come to be in place in the past and how it might be encouraged or facilitated in the future" (Leadbetter 2005: 23).

It is evident that adults' ability to implement an historically controversial practice, which involves physical contact with pupils, is compromised by the historical and socio-cultural influences within which they work. Further exploration of this model could be helpful in explaining the complex processes involved and could further enhance the understanding and discourse surrounding the introduction of FCT.

Before considering further the implications of the project in relation to future research and practice consideration needs to be given to the issues of reliability and validity of this study.

D. Reliability and Validity Issues

Many of the issues pertaining to reliability and validity were discussed in the methodology however it is important to reflect on the methods and tools used to acknowledge the potential threats to reliability and validity.

Reliability in action research and case study methods is compromised by the involvement of the researcher as an active participant in the process. The potential to influence the activities, attitudinal behaviour and the information being collected and reported on (Uzzel 2000) is indisputable. However, efforts were made to reduce this by

- Jointly developing the evaluation tools with the participants of the core group
- Using multiple sources of evidence to support triangulation (converging lines of enquiry) to clarify meaning and verify repeatability of an observation or interpretation (Stake 2000)
- Arranging for the evaluation data to be collected by independent interviewer or by self-report

The validity is compromised by the bias and subjectivity of the researcher in being supportive of FCT which could have led to biased reporting however an attempt has been made to represent all the data collected and provide a chain of evidence (Yin 1994) which allows readers to identify where the evidence has come from and judge the findings for themselves and also provides enough detail for other researchers to replicate the key elements of the study. Consideration of alternative explanations has been partially achieved in relation to the possible

theoretical interpretations. However other alternatives could have been considered (e.g. the pupils are merely responding more because they like the equipment) may have contributed to less biased interpretation. The use of multiple cases studies and the finding that at least two to three cases demonstrated similar results is supportive of analytical generalisation (Yin 1994) where the same theory is used to compare the empirical results of each case. As Yin (1994) states, if two or more cases are shown to support the same theory than replication may be claimed.

The construction of the questions used in the structured interviews and self-report questionnaires were revised through piloting to ensure that the essential questions were included and that they were understandable. Even though these were piloted with parents and teachers some of the questions were lengthy. However, because the majority of participants had attended the training they were familiar with the terminology. The adult outcome and process questionnaire were wieldy and less accessible to some parents. However the consistency of responses indicates that they were generally understood with participants only using the no comment or don't know option when what was being asked was outside their experience. The use of multiple interviewers reduced the potential effects of interviewer bias.

Observations using video data to record the evidence of events (specific behaviours being demonstrated) can be prone to observer effects, however the use of repeated observations meant that the pupils were very used to being filmed and usually knew the person who was doing the filming due to the repeated contact over time. If anything the pupils were either indifferent to the person filming or became oblivious over time. The event sampling used in analysing the video was based on the post intervention communication profiles collated from other sources, so the events being sampled were generally ones which had already been identified by others. It was the presence of the event that was recorded not the frequency. Frequency data on the whole even though collected was not used extensively. This is an area where data collection and analysis could have been enhanced. However the corroboration for a behaviour being present was gained from the fact that it had been reported in more than one source of evidence.

E. Implications for Future Practice

FCT has been demonstrated to have contributed towards making a significant difference for some pupils even in the relatively short period of time covered by this project. There is some indication that the pupils who have benefited the most are those on the autistic spectrum with severe language impairment although there were too few pupils in the sample with significant physical impairments to be able to draw any conclusions about this. Firm recommendations about the inclusion of other pupils in the project cannot be made on the basis of such a small sample. There are indications that pupils need regular, daily access to facilitation either in the home or school environment and preferably both. The implications for extending this project include the need to not only consider within child deficits but also the willingness and capacity of adults to engage in relationships that promote teaching and learning through mediation and collaboration.

Further training would need to incorporate the factors that led to the success of the training and support programme including the factors that helped the implementation. Ideally continued use of an action research model to build on and develop what has been learnt from this project would enable the project to extend so that more pupils with severe language impairment could benefit from AAC and FCT. This should include additional attention to ways in which other professionals can be engaged, specifically speech and language therapists, in developing a local and perhaps regional training programme.

F. Implications for Future Research

There is a lot of potential for further research in this area. Further exploration of the theories discussed could include, for example, an analysis of the behaviours associated with the movement differences of executing, switching and combing. Consideration of whether FCT supports working memory might be addressed through using sequence analysis to establish what the facilitator is doing prior to the pupil responding. Also consideration of whether the use of verbal prompting and feedback and voice output communication aids is a factor in supporting memory. A mapping out of the theories, which seek to explain the cognitive, and neuromotor difficulties pupils experience could consider how they might overlap

and compliment each other and provide a combined theoretical framework for understanding FCT and contributing the theoretical debate. This could also involve an investigation into the social and relationship aspects of FCT by closely observing the actions of the facilitator and user as well as their attitudes towards each other. Also further exploration of the historical and socio-cultural contexts within which FCT is being introduced through the application of activity theory has the potential to add to developing an alternative discourse and disassociating the practice of FCT from its damaging history.

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APPENDIX 1: Sample of Participants and Responses

PUPIL AND SCHOOL	PARTICIPANT	PUPIL OUTCOME	ADULT OUTCOME	PROCESS OUTCOME
Pupil a School A	1. Parent 1	Interview 1a	Interview 1a	Interview 1a
	2. Parent 2	Interview 1a	Interview 1a	Interview 1a
	3. Parent 3	Not attend interview	Not attend interview	Not attend interview
	4. Teaching assistant 1	Interview 2a	Interview 2a	Interview 2a
	5. Teaching assistant 2	Interview 2a	Interview 2a	Interview 2a
	6. Class teacher 1	Interview 2a	Interview 2a	Interview 2a
	7. Teaching assistant 3	Not applicable	No return to questionnaire	No return to questionnaire
	8. Support teacher 1	Not applicable	Self report questionnaire 3a	Self report questionnaire 3a
	9. Support teacher 2	Not applicable	Self report questionnaire 4a	Self report questionnaire 4a
	10. Speech therapist 1	No return to questionnaire	Not applicable	No return to questionnaire
	11. Head teacher 1	Not applicable	Not applicable	No return to questionnaire
Pupils b and c School B	12. Parent 4 (pupil b)	Interview 3b	Interview 3b	Interview 3b
	13. Parent 5 (pupil c)	Not attend interview	Not applicable	Not applicable
	14. Teaching assistant 4 (pupil b and c)	Interview 4b/c	Interview 4b/c	Interview 4b/c
	15. Teaching assistant 5 (pupil b and c)	Interview 4b/c	Interview 4b/c	Interview 4b/c
	16. Support teacher 3 (pupil b and c)	Not applicable	No return to questionnaire	No return to questionnaire
	17. Support worker 1 (pupil b)	Not applicable	No return to questionnaire	No return to questionnaire
	18. Support worker 2 (pupil b)	Not applicable	Self report questionnaire 5b	Self report questionnaire 5b
	19. Speech therapist 2	No return to questionnaire	Not applicable	No return to questionnaire
	20. SENCo 1 (pupil b and c)	Not applicable	Not applicable	Interview 4b/c
	21. SENCo 2 (pupil b and c)	Not applicable	Not applicable	No return to questionnaire
Pupils d and e School C	22a. Parent 6 (pupil d)	Not attend interview	No return to questionnaire	No return to questionnaire
	22b. Parent 7 (pupil d)	Interview 5d	Not applicable	Not applicable
	23. Parent 8 (pupil e)	Not attend interview	Not applicable	Not applicable
	24. Teaching assistant 6 (pupil d and e)	Interview 6d (not able to comment re pupil e)	Interview 6d (not able to comment re pupil e)	Interview 6d (not able to comment re pupil e)
	25. Class teacher 2 (pupil d and e)	Interview 6d (not able to comment re pupil e)	Interview 6d (not able to comment re pupil e)	Interview 6d (not able to comment re pupil e)
Pupil f School C	26. Parent 9	Not attend interview	Not applicable	Not applicable
	27. Teaching assistant 7	Interview 7f	Not able to attend interview	Self report questionnaire
	28. Class teacher 3	Interview 7f	Interview 7f	Interview 7f
	29. Support worker 3	Not applicable	No return to questionnaire	No return to questionnaire
Pupil g School C	30. Parent 9	Interview 8g	No return to questionnaire	No return to questionnaire
	31. Class teacher 3	Interview 9g	Interview 9g	Interview 9g
Pupils d, e, f, g School C	32. Speech therapist 3	No return to questionnaire	Not applicable	No return to questionnaire
	33. Head teacher 2	Not applicable	Not applicable	Interview 10d/e/f/g
	34. Deputy Head teacher 1	Not applicable	No return to questionnaire	No return to questionnaire

TABLE 7.1: Sample of participants and response to interviews and questionnaires by pupil a, b, c, d, e, f, g and school A, B, C,

APPENDIX 2: Table of Activities

Log No.	Date	Activity	Purpose
1	21.11.03	Presentation to doctoral students	Debate how a study on FCT might be conducted
2	10.12.03 11.12.03 12.12.03	Participation at international TASH conference in Chicago	Increase knowledge of international approaches to FCT and ideas on ways forward
3	19.12.03	Tutorial	Potential research question and methodology
	20.11.04 to 05.01.04	Negotiate Bolton University AAC/FCT trainer input to proposed project	Gain commitment from AAC/FCT trainer to potential project and agree input to core group meeting on and how this could be introduced as normally available resource in an LEA
4	06.01.04	1st core group meeting	Explore how to implement FCT as normally available resource
5	28.01.04	Tutorial	Discuss essential elements of action research from reading literature; project leadership; recording and reporting progress and evaluation methods
6	02.02.04	2nd core group meeting	Review initial ideas from first meeting, reflect and revise plans Agree arrangements for involving SALT
7	05.02.04	Meeting with service manager (SEN)	Agree a proposal for funding the pilot project to submit to service managers; discuss leadership of project
8	09.02.04 01.03.04	Meeting with service manager (EPS)	Discuss how to establish clarity in relation to accessing funding
9	11.03.04	3rd core group meeting	Review initial ideas from first meeting, reflect and revise plans
10	22.03.04 to 20.04.04	Development of survey	Identify potential pilot group of pupils
11	23.03.04	Meeting with local FCT user and facilitator	To gain insight into FCT user and facilitators story/journey to acceptance + share information about the project and explore ideas for their involvement
12	22.04.04	Tutorial	Update and clarify issues re role, survey/pilot group/ethics, timeline, measuring outcomes for pupils
13	23.04.04	Meeting with Andy Grayson FCT researcher	Share information about project and explore opportunities for support/joint working
14	11.05.04	Meeting with speech and language therapist	Discuss survey returns and agree potential pilot group to discuss with service managers
15	11.05.04 to 25.05.04	Analysis of survey data and information gathering on potential pilot group of pupils	Check on process of short listing, consider documentation available on individual pupils to inform decision making
16	27.05.04	4th Core group meeting	Review initial ideas from last meeting (10.03.04) and reflect on new information/revise plans
17	29.05.04	Tutorial	Update and clarify issues re differences in language, introduction to head teachers, baseline data
18	30.05.04	Preparation for meeting with head teachers	Produce framework for meeting, information to share, information to get/data collection and agreed actions
19	04.06.04	FCT Seminar at Bolton	Update knowledge of national and international developments
20	11.06.04	Meetings with head	Give information on project, decision re

	21.06.04	teachers	involvement and information on motivation, concern and needs
21	 18.06.04 21.06.04 21.06.04 02.07.04 05.07.04 09.09.04	Meetings with: parent pupil b parent pupil c staff school C staff pupils school B parent pupil a and staff school A parents pupils d, e, f, g	Give information on project, decision re involvement and information on motivation, concern and needs
22	11.03 to 18.06.04	Literature search, reading and completion of draft literature review and methodology	Consolidate knowledge of FCT and action research methodology in preparation for Viva and implementation of project
23	22.06.04	Meeting with LEA Communication Aids Project (CAP) Panel	Explore options for accessing equipment via CAP
24	22.06.04 23.06.04 30.06.04 01.07.04	AAC/FCT trainer assessments of potential pilot group of pupils	Assess pupils potential for benefiting from AAC/FCT intervention and involvement in the project. Produce assessment reports to inform decision-making re pilot group.
25	07.07.04	Sharing video assessment with parent of pupil 1	Gain parent view of assessment, collect information on pupil
26	12.07.04	Progression Viva	Review draft literature review and methodology
27	14.07.04	Tutorial	Update and clarify issues re baseline data, data streams and research log
28	15.07.05	5th Core group meeting	Review plans from last meeting (26.05.04) and reflect on new information/revise plans
29	21.07.04	Discussion with head teacher from school C	Clarify concerns and agree ways forward
30	19.08.04	Meeting with Andy Grayson, FCT researcher	Share information, ideas on research design, baseline assessment and opportunities for joint working
31	20.08.04	Overview of possible research questions regarding pupil outcomes	Clarify possible research questions, measures, data collection and data analysis for pupil outcomes
32	21.07.04	Meeting with AAC/FCT trainer	Agree details of training programme to reflect local practice. Explore options for accessing equipment. Agree amendments to FCT assessments reports to accommodate SALTs anticipated concerns
33	24.08.04	Meeting with 5 SALTs	Explain project and gain agreement for joint working and collaboration
34	23.08.04	Meeting with FCT user and facilitator	Update on project + explore possible input to training
35	27.08.04	Tutorial	Update and explore issues
36	08.09.04	6th Core group meeting	Review plans from last meeting (15.07.04), reflect on new information and revise plans
37	08.09.04	Meeting service manager (EPS)	Funding for researcher's time for project activities
38	16.09.04 29.10.04	Meetings with Andy Grayson and 3rd year psychology students	Discuss opportunities for two students to contribute towards project as part of 3rd year dissertation
39	22.09.04 to 23.09.04	Data collection proposal on measuring intentional communication	Get agreement and/or amendments to proposals from service managers group and training participants
40	23.09.04 24.09.04	Module 1 training	Input to training and increase own learning alongside all other participants – gain knowledge

	06.10.04 07.10.04 21.10.04 22.10.04		to implement programmes for pupils in project
41	29.09.04 01.10.04 15.10.04	Video all pupils in project	Collection of baseline video of non facilitated activity (1st observation)
42	15.10.04 12.11.04	Facilitation with pupil in project at special school A	Learn facilitation skills, develop use of software etc. Implement training
43	11.11.04	7th Core group meeting	Introduce new members to action research model, update and agree way forward re data, timelines and support issues
44	19.11.04 25.11.04	AAC/FCT trainer visits to school	Support and develop adult practice in relation to pilot pupils.
45	24.11.04 26.11.04	Video in two of the schools in the project	Participant observation of pupils with university students (2nd observation)
46	24.11.04	Meeting with SALT	Agree pupil outcome measures
47	29.11.04	Tutorial	Update and agree data collection and analysis. Models of writing up action research
48	02.12.04 03.12.04	Meeting with Martha Leary and attendance on her movement differences course	Share information, update own knowledge, networking
49	15.12.04	Work on evaluation tools and sampling issues	Develop 1st draft of adult outcome and process measure and explore sample options
50	20.12.04	Budget meeting with service manager	Agree budget for continued support to participants from AAC/FCT trainer
51	19.01.05	Meeting with Andy Grayson and his research assistant	Share information about project/bigger picture and explore opportunities to support/network
52	19.01.05	1st Network Meeting	Share information and update on project new ideas/strategies
53	21.01.05 11.02.05 15.02.05	AAC/FCT trainer visits to school	Support and develop adult practice Video data collection (3rd observation)
54	31.01.05	Staff meeting input to school C	Provide overview of project and information on AAC/FCT to support participants
55	10.02.05	8th Core group meeting	Review actions from last meeting, reflect on new information and revise plans where appropriate
56	10.02.05	1st Pilot of pupil outcome measures	Pilot and amend evaluation tools and agree sampling
57	01.03.05	Budget meeting	Identify budget for next financial year
58	02.03.05	Meeting with FCT trainer/assessor and SALT from ACE Oxford (SCOPE CAP team)	Exchange information and agree plans for future visits and actions re equipment (CAP)
59	02.03.05	1st CAP Assessment pupil b	Gain evidence for equipment needs of pupil b Video data collection (4th observation)
60	09.03.05	2nd Network Meeting	Share information and update on project new ideas/strategies
61	23.03.05	Attend premier of film Autism is a World by invitation from Doug Biklen	Network local, national and international people and groups.
62	29.03.05 31.03.05	Produce 1st Draft of evaluation pack (pupil, adult and process outcomes)	Develop outcome measures tools and arrangements for interviews and questionnaires including administrative support and interviewers

63	01.04.05	Prepare video of CAP assessment of pupil b	Develop evidence for gaining agreement to fund equipment (light writer and touch screen computer)
64	13.04.05	Home visit re pupil a	Complete sensory checklist
65	13.04.05	Meeting with SEN officer and team manager re equipment for pupil b	Share video evidence and gain agreement for equipment (light writer and touch screen computer)
66	14.04.05	Meeting with parent and SENCo re equipment for pupil b	Share video evidence and gain agreement for insurance of equipment (light writer and touch screen computer)
67	15.04.05	Tutorial	Update, check data collection and overview of dissertation, plans for write
68	20.04.05	Arrangements for data collection	Agree arrangements for interviews and questionnaires
69	03.05.05	2nd CAP assessment pupil a	Gain evidence for equipment needs of pupil b
70	18.05.05	Observation and work with pupil b in school	Learning how to facilitate and assess pupil learning needs
71	20.05.05	Develop action research overview = detailed chronology	Develop evidence for reporting on action research process
72	24.05.05	Meeting with Andy Grayson	Gain understanding of links with AAC/FCT groups in Europe
73	25.05.05	2nd Pilot of evaluation measures 2nd Final draft of evaluation measure	Pilot and amend evaluation tools and agree sampling
74	01.06.05 to 31.06.05	Interviews and questionnaires completed	Collect outcome data for analysis
75	26.05.05	Visit to school C with AAC/FCT trainer	Support to staff Participant observation of pupils (5th observation) development of future plans
76	26.05.05	3rd Network Meeting	Share information and update on project new ideas/strategies
77	27.05.05	Visit to school A with AAC/FCT trainer	Participant observation of pupils (5th observation) Training input to staff re software and facilitation.
78	13.06.05	Initial analysis of data to date	Produce overview of outcomes to date for core group meeting
79	15.06.05	9th Core group meeting	Review actions from last meeting, reflect on initial data analysis and agree next action steps
80	17.06.05	Visit to Bolton University with Andy Grayson	Networking re future options and development of project (research facility for communication and inclusion)
81	24.06.05	Tutorial	Update, agree methodology and arrangements for write up
82	29.06.05	3rd CAP assessment pupil d	Gain evidence for equipment needs of pupil b
83	30.06.05	Visit to school B with AAC/FCT trainer	Support to staff Participant observation of pupils (6th observation)
84	30.06.05	Discussion with SENCo school B	Establish views to date and agree plans for future of project
85	30.06.05	Home visit pupil a with AAC/FCT trainer	Support to parent Participant observation of pupil (6th observation)
86	30.06.05	4th Network Meeting	Share information and update on project new ideas/strategies
87	01.07.05	Visit to school C with AAC/FCT trainer	Support to staff Participant observation of pupils (6th observation)

		Discussion with HT	Establish views to date and agree plans for future of project

TABLE 7.2: Log of activities and purposes involved in the action research project taken from the detailed chronology

KEY TO COLOUR CODING IN TABLE 7.2:

Green = networking and developing relationships

Red = negotiating budgets and resources

Blue = developing and implementing data collection tools

Violet = developing and implementing training and support

Yellow = extending and sharing knowledge and understanding of AAC/FCT and theoretical perspectives

Black – core group meetings that covered every theme

APPENDIX 3: Analysis of Survey Returns (Survey of Pupils with Severe Communication Impairment)

TABLE 7.3: Number of survey returns by type of school and professionals

	Mainstream all	Special C	Special D	Special E	Special F	Total
Educational Psychologists	23	0	0	0	0	23
Support service	8	0	0	0	0	8
Speech therapists	2	19	3	0	0	24
	33	19	3	0	0	55

Of the 55 returns 9 names were duplicated (more than one service had completed a survey for 9 pupils). The total number of names was 46 but 3 pupils were out of the age range. This led to a total sample of 43 pupils. 22 of these were in mainstream school, 18 in special school A and 3 in special school B.

TABLE 7.4 Numbers of potential pupils excluded from the sample of 43 by school and criteria

Criteria for exclusion from sample	Mainstream all (22 potential)	Special C (18 potential)	Special D (3 potential)	Total
Survey ratings and/or speech therapist indicate does not need alternative means of communication	2	0	3	5
Survey responses indicate consistently able to give and get information using spoken words	9	0	0	9
Severe hearing and/or visual impairment	2	1	0	3
Survey ratings indicate low potential/motivation to communicate i.e. rated 4/5	0	9	0	9
Very difficult/unstable home background	1	0	0	1
Totals	14 (8 potential)	10 (8 potential)	3 (0 potential)	27 (16 potential)

A short-list of 16 pupils was discussed at the 4th Core Group Meeting

APPENDIX 4: Criteria for Pilot Sample

Criteria used by the researcher and speech and language therapist to exclude pupils from the survey returns:

- Wrong age/survey wrongly completed
- Survey ratings and/or speech therapist indicate does not need alternative means of communication
- Survey responses indicate consistently able to give and get information using spoken words
- Severe hearing and/or visual impairment
- Very difficult/unstable home background
- Survey ratings indicate low potential/motivation to communicate i.e. rated 4/5

(Research Log 11.05.04)

Criteria used to further exclude or include pupils in the sample used by the core group at the 4th meeting:

Exclusion criteria:

- Pupil has means to communicate
- Pupil has made considerable progress
- Lack of quality information
- Concerns about support from family
- Concerns about support from school
- Unpredictable medical condition affecting pupils ability to engage

Inclusion criteria:

- Parental support
- School support
- Reports of potential but lack of skills
- Agreement between educational psychologists and speech and language therapists
- Motor problems hindering means to communicate
- Same school, year and or group as other potential pupils

- Speech and language therapist expressing clear view about wanting pupil/s to be involved due to good potential but lack of opportunities to communicate

(Research Log 26.05.05)

APPENDIX 5: Semi Structured Interview Schedule (Head Teachers and School Managers)

Where are you now in terms of AAC/FCT being used in school?

Not at all				Lots
1	2	3	4	5

Where would you want to be?

Not at all				Lots
1	2	3	4	5

How interested are you in your school being included in this project?

Not at all				Very
1	2	3	4	5

What interests/motivates you to take part (purpose)?

What concerns/reservations do you have?

What would you need to be able to feel part of the project e.g. planning, monitoring, evaluating? (Strategy – how to involve)

How would you like to introduce this to parents/teachers/TA?

Can we agree some dates for this to take place?

What dates are suitable for AAC/FCT trainer to visit for assessments of pupils?

Would you be OK with videoing the assessments if a camera is provided?

APPENDIX 6: Overview of Facilitating Communication Training (FCT) Course September – October 2004

Day One

9.30 Introducing FCT activity

Ground Rules

Overview of Project

9.50 Outline of Course and Assignments

10.30 What is FCT, history and overview

12.0 Neuromotor impairments

1.00 Lunch

2.0 Introduction to Alternative and Augmentative Communication (AAC)

Designing a communication board

2.0 Software used to produce communication boards

3.30 Finish

Day Two

9.30 Designing a communication board activity

11.30 AAC and neuromotor activities

- How the facilitator role helps with motor planning and proprioception
- How conversation is linked to communication boards
- Interactions dependent on disability, setting, communication aid and task
- Accuracy in reading non-verbal communication

1.0 Lunch

2.0 Planning individual programmes for pupils on the project

- Looking at short video clips of each pupil and planning programmes based on participants' knowledge of the pupil

3.30 Finish

Interim Activity: to facilitate with pupils using multiple choice on low-tech boards or typing phrases known to pupil and facilitator

Day Three

9.30 Annie's Coming Out – video

9.45 Feedback from practical activities and working with young people

- What went well/not so well?
- Video/data collection ideas

10.45 Break

11.0 The educational context, theory and methods of teaching and learning

12.00 Using FCT and AAC alongside other supports in mainstream and special schools

- Differentiating materials
- Importance of literacy

1.0 Lunch

2.0 Supporting videos from the morning

2.30 Structuring Success – the ladder (physical hierarchy)

3.30 Finish

Day Four

9.30 Structuring Communication

11.30 Fading towards independence

1.00 Lunch

2.0 Developing an FCT Programme

- Plan an activity to be observed/videoed over next 2 weeks

3.30 Finish

Day Five

9.30 Video analysis exercise of FCT session for coursework

10.0 Using Information Communication Technology:

- Communication aids
- Communication vocabularies
- Symbol systems – including Signs and Symbols Directory
- Recording learning

- Supporting learning
- Direct and indirect access
- Misunderstandings arising from yes/no communication

11.30 Least Dangerous Assumption - Guest lecture from FCT user and FCT facilitator

Person Centred Supports (Jackie)

12.30 Record keeping

- Ways of recording progress during FCT programmes

1.00 Lunch

2.0 Guest lecture (FCT user)

3.30 Finish

Day Six

9.30 Sharing observations/videos of activities undertaken

10.0 Validation and facilitator influence

Tips and strategies for facilitators

1.00 Lunch

2.0 Human right to communicate (guest lecture from communication aid user)

3.0 Summing up and ways forward including gaining accreditation and support for assessment

3.30 Finish

APPENDIX 7: PUPIL OUTCOME FORMS

AAC/FCT PILOT PROJECT – PUPIL OUTCOME FORMS

MEANS, REASONS AND OPPORTUNITIES TO COMMUNICATE AND DEMONSTRATE LEARNING*

PUPIL NAME: **COMPLETED WITH:**

DATE: **ROLE/RELATIONSHIP TO PUPIL:**

GENERAL GUIDANCE

- As part of the AAC/FCT pilot project information is being gathered on changes in pupils communication and demonstration of learning over the last 6 months. This is a very short amount of time and we may find that this exercise will need to be repeated when the pupils and adults involved have had more time to implement strategies. We do know from the research that significant changes are unlikely to occur for at least 6 months to a year and in many cases it can be several years.
- This information is being gathered from parents/carers, teaching staff and speech and language therapists. It may be complied onto one form for each pupil e.g. colour coded according to who provided the information to recognise that there may be different examples in different settings and also differences of opinion.
- Comparisons with baseline data gathered prior to the project via speech and language therapist reports, school/teaching staff reports, parent reports and video data will be used to identify any changes
- Any changes noted will be reported in context in relation to each pupil. No general assumptions or generalisations can or will be made that any changes are as a direct result of involvement in the project. There are far too many other variables involved e.g. changes in school/home situations, general development of pupils as they grow older, adults confidence in using strategies, time/resources made available, willingness of pupils to engage etc.
- This pupil outcome data will be combined with other data using a case study approach to generate ideas/recommendations for future provision and practice for individual pupils and the use of AAC/FCT within the local authority.
- Perceived reasons for any changes may indicate where further monitoring/analysis would be needed in the future.
- Due to the small group of people involved in this project it will not be possible to ensure complete confidentiality. However, all names will be removed. Pupils will be referred to by a letter (e.g. pupil a) and adults by their role (e.g. teacher 1) so that any reporting (e.g. to the LEA and university) will be anonymous.
- The following charts have been divided into 4 sections:

1. Means to communicate and demonstrate learning 2. Reasons to communicate and demonstrate learning 3. Opportunities to communicate and demonstrate learning 4. Adults perceived reasons for any changes in the young person's communication and demonstration of learning

PLEASE TICK THE RELEVANT BOXES AND PROVIDE BRIEF EXAMPLES WHERE POSSIBLE – MANY THANKS

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* Over ten years ago the Means, Reasons and Opportunities model of communication was developed and used for teaching a group of staff working with people with learning disabilities in Leicestershire by Della Money. Subsequently it was used in Nottinghamshire as an integral part of the Talkabout Teaching Package (Money & Thurman 1994). The original model has since been developed and expanded to be used by numerous therapists, teachers, nurses, lecturers and other professionals throughout the UK.

MEANS TO COMMUNICATE AND DEMONSTRATE LEARNING

MEANS TO COMMUNICATE AND DEMONSTRATE LEARNING	YES	NO	EXAMPLE Where there are several examples please choose the most frequent	FREQUENCY				
				several times a day	once a day	several times a week	once a week	once a month or less
Vocalisation (sounds)								
1. Squeals								
2. Groans								
3. Repetitive sounds								
4. Other – please specify								
Facial Expression								
5. Smile								
6. Frown								
7. Other- please specify								

MEANS TO COMMUNICATE AND DEMONSTRATE LEARNING	YES	NO	EXAMPLE Where there are several examples please choose the most frequent	FREQUENCY				
				several times a day	once a day	several times a week	once a week	once a month or less
Body movement/gesture								
8. Stiff								
9. Floppy								
10. Wave								
11. Push away								
12. Take adult to								
13. Walk/ run away								
14. Kick/hit out								
15. Rocking								
16. Manual sign (e.g. Makaton)								
17 Other – please specify								

MEANS TO COMMUNICATE AND DEMONSTRATE LEARNING	**YES**	**NO**	**EXAMPLE** Where there are several examples please choose the most frequent	**FREQUENCY**				
				several times a day	once a day	several times a week	once a week	once a month or less
Eye gaze to								
17. Objects								
18. Pictures								
19. Signs and symbols								
20. Words								
21. Initial letters								
22. Other – please specify								

MEANS TO COMMUNICATE AND DEMONSTRATE LEARNING	YES	NO	EXAMPLE Where there are several examples please choose the most frequent	FREQUENCY				
				several times a day	once a day	several times a week	once a week	once a month or less
Giving/pointing to with and/or without support			**Use "F" to indicate where physical support/touch improves performance**					
23. Objects								
24. Pictures with words								
25. Symbols with words (e.g. Makaton, Rebus, PCS)								
26. Words only (reading)								
27. Initial letters								
28. Typed/written words (spelling)								
29. Other – please specify								
Spoken words/phrases								
30. Objects								
31. Actions								
32. Repeated phrases								
33. Other – please specify								

PERCIEVED REASONS FOR ANY CHANGES IN THE YOUNG PERSON'S COMMUNICATION AND DEMONSTRATION OF LEARNING

Question	Yes	No	Example/Comment
1. Do you feel that the young person's communication has changed over the last 6 months?			
2. If yes, what changes have you noticed the most?			
3. If yes, in your opinion what do you think led to these changes taking place?			
4. If no, what do you feel may have prevented any changes taking place?			

PERCEIVED REASONS TO COMMUNICATE AND DEMONSTRATE LEARNING

REASONS TO MAKE THINGS HAPPEN	YES	NO	EXAMPLE Where there are several examples please choose the most frequent 1-2 examples	FREQUENCY several times a day	once a day	several times a week	once a week	once a month or less
1. Making a request								
2. Asking for help								
3. Regulating/directing others								
4. Refusing or protesting								
5. Ending an interaction								
6. Other – please specify								

REASONS	YES	NO	EXAMPLE	FREQUENCY				
O EXPRESS HEMSELVES			Where there are several examples please choose the most frequent 1-2 examples	several times a day	once a day	several times a week	once a week	once a month or less
. Express needs – food, drink, toilet, activity etc.								
. Express likes/dislikes								
. Express agreement (yes)								
10. Express disagreement (no)								
11. Express feelings – sad, happy, angry, tired etc.								
12. Other – please specify								

REASONS	YES	NO	EXAMPLE	FREQUENCY				
TO COMMENT ON THINGS			Where there are several examples please choose the most frequent	several times a day	once a day	several times a week	once a week	once a month or less
13. Commenting								
14. Giving information								
15. Responding to questions								
16. Other – please specify								

TO GAIN INFORMATION								
17. Ask questions								
18. Other – please specify								

REASONS	YES	NO	EXAMPLE	FREQUENCY				
FOR SOCIAL REASONS			Where there are several examples please choose the most frequent	several times a day	once a day	several times a week	once a week	once a month or less
19. Greetings and farewells								
20. Getting attention								
21. Initiating/starting an interaction								
22. Apologising								
23. Joking or teasing								
24. Chatting								
25. Other – please specify								

OPPORTUNITIES TO COMMUNICATE AND DEMONSTRATE LEARNING

ACCESS TO:	YES	NO	EXAMPLE	WHO WITH? (teacher, parent, friend etc.)	WHEN? (weekly, daily, hourly, continuously)	WHERE? (home, school, lessons, breaks etc)
1. Low tech communication options e.g. yes/no boards, choice boards/cards, books						
2. High tech communication options e.g. speaking choice boards, computer, light writer						
3. People with whom the pupil has a communication relationship (people who understand the young person's communication needs and has an expectation that the pupil will respond given the appropriate supports)						

ACCESS TO:	YES	NO	EXAMPLE	WHO WITH? (teacher, parent, friend etc.)	WHEN? (weekly, daily, hourly, continuously)	WHERE? (home, school, lessons, breaks etc)
4. Routines that enable the pupil to respond in a consistent manner over time e.g. greetings, register, choice of lunch, choice of activity etc.						
5. Activities/subjects that interest and motivate the pupil to engage						
6. Differentiated curriculum materials and/or individualised learning programme e.g. multiple choice, cloze						

APPENDIX 8: Total Responses from Adults' to Adult Outcomes Structured Interview/Self Report Questionnaire

Pupil a sample = 7 (2 parent/carers, 2 TA's, I class teacher, 2 support teachers) out of 9 possible (one parent not attend interview, one TA not return questionnaire as no longer work with pupil)

Pupil b and c (same teaching staff) sample = 4 (pupil b parent, 2 TA's, 1 support worker/PA) out of 6 possible (one support teacher and one support worker/PA not return – reasons unknown)

Pupil d sample = 2 (1 teacher and 1 teaching assistant) out of possible 3 (1 parent not able to attend interview)

Pupil e = no returns

Pupil f = 1 (1 teacher) out of 3 possible (one teaching assistant could not be released for the interview, one support worker withdrew from project)

Pupil g = 1 (teacher) out of 2 possible (1 parent taken ill and not able to attend interview)

TOTAL = 15 out of possible 23 (directly involved with pupils and 1 teacher who attended training but did not return questionnaire)

TABLE 7.5: Adult responses to perceived changes in knowledge practice and attitudes interview and questionnaire by number of respondents per pupil a, b, c, d, f and g,

PERCEIVED CHANGES IN KNOWLEDGE, PRACTICE AND ATTITUDE				
Question	**Yes**	**No**	**Total Yes**	**Total No**
1a. Has your **knowledge** of low-tech options increased? (e.g. yes/no boards, choice boards, letter boards)	7a 4b/c 0d 1f 0g	0a 0b/c 2d 0f 1g	12	3
1b. Has your **use** of low tech options increased	5a 4b/c 1d 1f 1g	2a 0b/c 1d 0f 0g	12	3
2a. Has you **knowledge** of high tech options increased? (e.g. computers, electronic communication aids)	6a 4b/c 2d 1f 1g	1a 0b/c 0d 0f 0g	14	1

2b. Has your **use** of high tech options increased?	2a 4b/c 1d 1f 1g	5a 0b/c 1d 0f 0g	9	6
3a. Has your **knowledge** of computer software to develop communication aids increased? (e.g. Clicker 4, the Grid)	6a 4b/c 1d 1f 1g	1a 0b/c 1d 0f 0g	13	2
3b. Has your **use** of computer software to develop communication aids increased?	5a 3b/c 0d 1f 1g	2a 1b/c 2d 0f 0g	10	5
4a. Has your **knowledge** of computer software/teaching materials to support pupils in communication/demonstration of learning increased? (e.g. Cloze Pro, First Keys, Thinking skills Co-Writer)	5a 4b/c 1d 1f 1g	2a 0b/c 1d 0f 0g	12	3
4b. Has your **use** of computer software/teaching materials to support pupils' communication/demonstration of learning increased?	4a 4b/c 0d 1f 0g	3a 0b/c 2d 0f 1g	9	6
5a. Has your **knowledge** of physical barriers to communication increased? (e.g. sensory-motor issues, movement differences)	7a 4b/c 1d 1f 1g	0a 0b/c 1d 0f 0g	14	1
5b. Has your **use** of strategies to overcome/alleviate physical barriers to communication increased?	6a 4b/c 2d 1f 1g	1a 0b/c 0d 0f 0g	14	1
5c. Has your **knowledge** of environmental barriers to communication increased? (e.g. access to equipment, people supports, access through daily routines and activities)	6a 3b/c 1d 1f 0g	1a 1b/c 1d 0f 1g	11	4
5d. Has your **use** of strategies to overcome/alleviate environmental barriers to communication increased? (e.g. accessing equipment, joint work with parents/teaching staff, choice making built into timetable/curriculum)	5a 3b/c 2d 1f 1g	2a 1b/c 0d 0f 0g	12	3
6a. Has your **attitude** towards pupils with severe communication difficulties changed?	5a 4b/c 0d 1f 1g	2a 0b/c 2d 0f 0g	11	4
6b. Has your **understanding** of pupils with severe communication difficulties changed?	7a 4b/c 1d 1f 1g	0a 0b/c 1d 0f 0g	14	1

Question	More	Same		
7. Do you view pupils with communication difficulties as having more, the same or less **potential** than you did previously?	5a 4b/c 0d 1f 1g	2a 0b/c 2d 0f 0g	11	4
8. Do you think low-tech aids provide more, the same or less **options** than you did previously?	5a 4b/c 2d 1f 1g	2a 0b/c 0d 0f 0g	13	2
9. Do you think high tech aids provide more, the same or less **options** than you did previously?	7a 4b/c 0d 1f 1g	0a 0b/c 2d 0f 0g	13	2
Question	**Yes**	**No**		
10a. Have you had any reservations or concerns about using any strategies you have learnt about? If yes please give examples and complete the rest of this section. If no then go to question 11.	6a 3b/c 2d 1f 1g	1a 1b/c 0d 0f 0g	13	3
10b. Are your reservations/concerns related to confidence?	1a 1b/c 2d 0f 1g	5a 2b/c 0d 1f 0g	5	8
10c. Are your reservations/concerns related to adversely influencing a person's communication?	6a 1b/c 2d 1f 1g	0a 2b/c 0d 0f 0g	11	2
10d. Are your reservations/concerns related to the physical touch required to implement FCT?	0a 2b/c 2d 1f 0g	6a 1b/c 0d 0f 1g	5	8
10e. Are your reservations/concerns related to the consequences of offering more options/choices to young people?	3a 0b/c 0d 1f 0g	3a 3b 2d 0f 1g	4	9
10f. Are your reservations/concerns related to other people's attitudes towards what you are trying to do?	2a 3b/c 0d 1f 1g	4a 0b/c 2d 0f 0g	7	6
10g. Other reservations/concerns? Please give examples.	0a 1b/c 0d 0f 0g	6a 2b/c 2d 1f 1g	1	12
11a. Do you feel that your practice has changed over the last 6 months?	6a 4b/c 2d 1f 1g	1a 0b/c 0d 0f 0g	14	1

APPENDIX 9: Total Responses from Adults to Adult Process Structured Interview/Self-Report Questionnaire

TABLE 7.6: Adult responses to factors that helped and/or hindered the introduction and implementation of the project by pupil (a, b, c, d, f, g)

A. FACTORS RELATED TO SETTING UP THE PROJECT	Helped	Hindered	Don't Know/No Comment
1. Formation of a steering group including service managers and a speech and language therapist	3a 2b/c 1g 1defg		4a 3b/c 2d 2f
TOTALS	**7**		**11**
2. Access to LEA funding for training and implementation of the project	5a 2b/c 1g 1defg		2a 3b/c 2d 2f
TOTALS	**9**		**9**
3. Use of an action research model i.e. finding out, planning, acting, reflecting and revising plans in light of new information/experience	5a 2b/c 2f 1g 1defg		2a 3b/c 2d
TOTALS	**11**		**7**
4. Development and use of a survey to identify potential need	3a 2b/c 2f 1defg		4a 3b/c 2d 1g
TOTALS	**8**		**10**
5. Introduction of project to school managers and teaching staff	3a 5b/c 1g 1defg		4a 2d 2f
TOTALS	**10**		**8**
6. Introduction of project to parents/carers	3a 5b/c 2f 1g 1defg		4a 2d
TOTALS	**12**		6

7. Selection of pilot group of pupils for initial assessments using a survey **TOTALS**	1a 2b/c 2f 1g 1defg **7**		6a 3b/c 2d **11**
8. Selection of pilot group of pupils for initial assessment using a survey and discussion with teaching staff **TOTALS**	1a 1b/c 2f 1g 1defg **6**		6a 4b/c 2d **12**
9. The initial assessments of pupils potential to benefit from being in the pilot group conducted by AAC/FCT trainer **TOTALS**	4a 2b/c 1d 2f 1g 1defg **11**		3a 3b/c 1d **7**
10. Sharing information with other support services/agencies e.g. • Speech and language therapists • Support staff (Inclusive Education Service) • Educational Psychologists • Communication Aids Project **TOTALS**	6a 4b/c 2f 1g 1defg **14**		1a 1b/c 2d **4**
11. Other - please specify		1defg	

B. FACTORS RELATED TO THE TRAINING IN SEPTEMBER AND OCTOBER 2005	**Helped**	**Hindered**	**Don't know/No Comment**
B1. THE NUMBER AND RANGE OF PEOPLE INVOLVED			
12. The **number** of adults (parents/carers, teaching staff, support staff, speech and language therapists, facilitators, educational psychologists etc) able to be released to attend the training **TOTALS**	7a 4b/c 1d[1] 1g[2] **13**	 1g **1**	
13. The **range** of adults (parents/carers, teaching staff, support staff, speech and language therapists, facilitators, educational psychologists etc) attending the training **TOTALS**	7a 4b/c 1d 1g **13**		
14. Some adults attending some parts of the training **TOTALS**	2a 3b/c **5**	5a 1d **6**	 1b/c 1g **2**

15. The amount of time the training lasted (6 days)[3] **TOTALS**	4a 3b/c 1g **8**	3a 2b/c 1g 1defg **7**	
16. Lack of funding for school staff to be released to attend the training[3] **TOTALS**		5a 5b/c 1g 1defg **12**	2a 1d **3**
17. The involvement of AAC/communication aid users **TOTALS**	6a 4b/c 1g **11**		1a 1d **2**
18. The involvement of FCT users **TOTALS**	6a 3b/c 1g **10**		1a 1b/c 1d **3**
19. The involvement of experienced facilitator **TOTALS**	7a 4b/c 1g **12**		 1d **1**
20. Other – please specify			

B2. CONTENT OF TRAINING	**Helped**	**Hindered**	**Don't know/No Comment**
21. History and overview of AAC/FCT **TOTALS**	7a 4b/c 1d 1g **13**		
22. Physical and sensory (neuromotor) impairments that can affect communication/demonstration of learning **TOTALS**	7a 4b/c 1d 1g **13**		
23. Design and use of low tech communication aids **TOTALS**	7a 4b/c 1d 1g **13**		
24. Signs, symbols, vocabularies and software (e.g. Grid and Clicker 4) to support design of low tech aids **TOTALS**	7a 4b/c 1d 1g **13**		

25. High tech communication aids **TOTALS**	7a 2b/c 1d 1g **11**		2b/c **2**
26. Theories and methods of teaching and learning **TOTALS**	6a 4b/c 1d 1g **12**		1a **1**
27. Using AAC/FCT alongside other supports **TOTALS**	7a 4b/c 1d 1g **13**		
28. Structuring success – the ladder **TOTALS**	6a 3b/c 1d 1g **11**		1a 1b/c **2**
29. Fading towards independence **TOTALS**	7a 3b/c 1d 1g **12**		 1b/c **1**
30. Validation and influence in communication – FCT guidelines **TOTALS**	6a 2b/c 1d 1g **10**		1a 2b/c **3**
31. Planning activities/programmes for pupils **TOTALS**	7a 4b/c 1d 1g **13**	1b/c[2] **1**	
32. Options for accreditation as a trained facilitator **TOTALS**	6a 3b/c 1d 1g **11**		1a 1b/c **2**
33. Other – please specify	1a		

B3. DELIVERY OF TRAINING (METHODS)	**Helped**	**Hindered**	**Don't Know/No Comment**
34. Power point presentations **TOTALS**	7a 3b/c 1d 1g **12**	1b/c **1**	

35. Using low tech communication aids	7a 4b/c 1d 1g		
TOTALS	**13**		
36. Using high tech communication aids	7a 4b/c 1d 1g		
TOTALS	**13**		
37. Using software to design communication aids	7a 4b/c 1d 1g		
TOTALS	**13**		
38. Joint discussion and planning for pupils	7a 4b/c 1d 1g		
TOTALS	**13**		
39. Using videos of pupil assessments	6a 4b/c 1d 1g		1a
TOTALS	**12**		**1**
40. Seeing video of communication aid users and/or facilitators	6a 4b/c 1d 1g		1a
TOTALS	**12**		**1**
41. Role play activities e.g. using a communication aid as a non-speaker	6a 4b/c 1d 1g		1a
TOTALS	**12**		**1**
42. General discussions e.g. theories, strategies	7a 4b/c 1d 1g		
TOTALS	**13**		
43. Discussions of concerns, emotional challenges	7a 1b/c 1d 1g		3b/c
TOTALS	**10**		**3**
44. Least dangerous assumption	4a 2b/c 1d 1g		3a 2b/c
TOTALS	**8**		**5**

45. Human right to communication (Alan Martin) **TOTALS**	6a 3b/c 1d 1g **11**		1a 1b/c **2**
46. Other – please specify			

C. FACTORS RELATING TO THE IMPLEMENTATION OF IDEAS/STRATEGIES TO SUPPORT PUPILS WITH SEVERE COMMUNICATION IMPAIRMENT	**Helped**	**Hindered**	**Don't Know/No Comment**
47. Trying out new strategies/implementing ideas **TOTALS**	6a 5b/c 2d 2f 1g 1defg **17**		1a **1**
48. Sharing learning with others (at school/home) being able to explain why doing something different **TOTALS**	6a 5b/c 2d 2f 1g 1defg **17**		1a **1**
49. Structure/timetable of the day **TOTALS**	5a 1b/c 2d 1g 1defg **10**	1a 3b/c 2f 1defg[2] **7**	1a 1b/c **2**
50. Structure of staffing/support in school **TOTALS**	5a 3b/c 1defg **9**	1a 3b/c[2] 1d 2f 1g **9**	1a 1b/c 1d **3**
51. Provision and use of equipment e.g. keyboards, lap tops, light writer **TOTALS**	5a 5b/c 2f 1g 1defg **14**	1a[2] 2f **3**	1a 2d **3**
52. Provision and use of software e.g. First Keys, Cloze Pro, Co Writer, Clicker 4, The Grid **TOTALS**	5a 5b/c 1defg **11**	1a 3b/c[2] 2f **6**	1a 2d 1g **4**
53. Other – please specify		1a 2f	

D. FACTORS RELATING TO MONITORING AND FOLLOW UP SUPPORT TO PUPILS AND ADULTS	Helped	Hindered	Don't know/No Comment
54. Visits to school/home by AAC/FCT trainer	4a 4b/c 1d 2f 1g 1defg		3a 1b/c 1d
TOTALS	**13**		**5**
55. Visits to school/home by action researcher	4a 4b/c 1d 2f 1g 1defg		3a 1b/c 1d
TOTALS	**13**		**5**
56. Support to school from the communication and interaction team/communication co-ordinator in school	5a 1d 1defg	2b/c	2a 3b/c 1d 2f 1g
TOTALS	**7**	**2**	**9**
57. Video of follow up sessions	2a 4b/c 1d 2f 1g 1defg		5a 1b/c 1d
TOTALS	**11**		**7**
58. Suggestions for strategies, teaching materials etc.	5a 4b/c 1d 1f 1g 1defg		2a 1b/c 1d 1f
TOTALS	**13**		**5**
59. Video data collection by university students	1b/c	2b/c	7a 2b/c 2d 2f 1g 1defg
TOTALS	**1**	**1**	**15**

60. Staff input e.g. staff meetings, training	4a 4b/c 1d 2f 1g 1defg		3a 1b/c 1d
TOTALS	**13**		**5**
61. Network meetings	3a 2b/c 1g 1defg	2b/c	4a 1b/c 2d 2f
TOTALS	**7**	**2**	**9**
62. Steering group expanding to include parents, teaching staff and academic	1b/c 1g 1defg		7a 4b/c 2d 2f
TOTALS	**3**		**15**
63. Other – please specify	1defg	2f 1defg	

E. YOUR VIEWS ABOUT THE FUTURE	**Yes**	**No**	**Not sure**
64. Would you like to see the project continued for the pupils already involved?	4a 5b/c 2d 2f 1g 1defg		3a
TOTALS	**15**		**3**
65. Would you like to see the project extended to include other pupils?	7a 4b/c[4] 2d 2f 1g 1defg		
TOTALS	**17**		
66. Do you know of more children who you think would benefit from being given increased options in AAC?	6a 4b/c 2d 2f 1g 1defg	1a	1b/c
TOTALS	**16**	**1**	**1**

67. Do you know of more children who you think would benefit form being given physical support to access their communication aids (FCT)?	3a 4b/c 1d 2f 1g 1defg	4a	1b/c 1d
TOTALS	**12**	**4**	**2**
68. Do you think more adults should be given the option to be trained in AAC?	7a 5b/c 2d 2f 1g 1defg		
TOTALS	**18**		
69. Do you think more adults should be given the option to be trained in FCT?	7a 5b/c 2d 2f 1g 1defg		
TOTALS	**18**		
70. Would you like to maintain/increase your knowledge, experience, use of AAC?	6a 5b/c 2d 2f 1g 1defg	1a	
TOTALS	**17**	**1**	
71. Would you like to maintain/increase your knowledge, experience, use of FCT?	6a 5b/c 2d 2f 1g 1defg	1a	
TOTALS	**17**	**1**	

[1]Only entered results from adults who attended the training

[2] One or more respondent indicated helped and hindered

[3]School managers were also asked these questions

[4]The school SENCo responded 'not yet'

APPENDIX 10: AAC/FCT Groups and Organisations

ACE Advisory Trust centres provide support to access communication aids through the government funded Communication Aids Project http://www.ace-centre.org.uk/

Bolton University:

- Karen Baron (kb2@bolton.co.uk) is the administrator for Facilitating Access to Communication Technology (FACT) news sheet
- Facilitated Communication Training Accredited Course: www.inclusion-boltondata.org.uk/
- Developed strong links with Syracuse University and DEAL communication Centre and support local, national and international seminars and training events on AAC/FCT

Communication Aids Project (government funded) provides support for increasing access to communication aids http://cap.becta.org.uk/

Castle group in London (provide similar services to CandLE):
http://www.hyndman.demon.co.uk/services.htm

Communication and Learning Enterprises (CandLE), Director Marion Stanton web site: http://www.contactcandle.co.uk/

Communication Matters national voluntary organisation
http://www.communicationmatters.org.uk/

DEAL communication centre in Australia where Rosemary Crossley is based web site: http://home.vicnet.net.au/~dealcc/

Nottingham Trent University where Andy Grayson is based:
http://www.ntu.ac.uk/research/schoolofsocialsciences/psychology_profiles/9019.html

Scope UK website with detailed manuals on AAC

http://www.scope.org.uk/education/aac.shtml

Syracuse University where Douglas Biklen is based web site:

http://soeweb.syr.edu/thefci/

TASH website relating to AAC/FCT: http://www.breaking-the-barriers.org/index.htm

APPENDIX 11: Facilitation Ladder (Marion Stanton 2004. Adapted from Rosemary Crossley 1994)

Rung/ step	Purpose		Activity	
			Literacy based	Language Based
16	Full communication.			Self initiated by user – user gets aid asks for it without prompt. ***
15	User leads.		.	Spontaneous conversation – user chooses topic. ***
14	Facilitator encourages.			Wide ranging conversation – encouragement to use a range of structures may be needed – now you ask me a question.***
13	Facilitator Leads			Answering questions – what did you do at the weekend? How did you like the movie?**
12	Many possible options.		Giving the start of a paragraph/story for the user to finish.**	
11	A range of options.		Giving answers in a set context – picture captions, describing pictures, speech bubbles or cartoons.**	
10	A few possible options.		E.G. Words that rhyme with DAY. Name 5 wild animals/vegetables.*	
9	Very few options.		Cloze exercises – provide the missing word: Bob _____ a car. Name a green vegetable. Name an animal that provides cheese.*	
8	Sequencing or single choice from a range of options.		What order does this go in: supper, breakfast, lunch. Can you put the story in order (from symbols or pictures)	Would you like Orange, Tea, Coffee or Lemonade: O, T, C, L. Do you want toast then bacon or bacon then toast for breakfast?*
7	Single point to the user's choice out of 2.			YES/NO, TRUE/FALSE, TEA/COFFEE, CRISPS/BISCUIT.*
6	Set answers that require thought.		Crosswords, Object, picture or symbol based thinking skills.	
5	Set answers requiring a little thought.		Association games: Knife goes with ____. The opposite of day is _____.	
4	Facilitator dictates long sequence.		THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG. Could be done in words or symbols.	
3	Facilitator dictates very short sequence.		Point to the red one then the blue one. Spell HORSE. Labelling items. Type your name.	
2	Single point.		Replace missing letter. An animal that goes meow what's missing: C_T? Point to the red one. Which is the picture of the CAT? YES/NO, TRUE/FALSE.	
1	Matching using a single point.		Object, picture, symbol or word matching.	Object, picture, symbol or word matching.

N.B. The user may use spelling or (if they are unable to spell) may use an object, picture or symbol based system to indicate.

*= facilitators may anticipate response from a small range

**=facilitators may anticipate response from a context

***= facilitators will only be likely to anticipate response as the communication progresses

NB We are not testing the users understanding. We are using physical access, which slowly increases in complexity to develop our own facilitation skills. We may, however, find out more about the user's skills incidentally as we progress up the ladder.

Resilience: A study of risk and protective factors from the perspective of young people with experience of Local Authority Care

Research Project submitted September 2003

RESILIENCE: A STUDY OF RISK AND PROTECTIVE FACTORS FROM THE PERSPECTIVE OF YOUNG PEOPLE WITH EXPERIENCE OF LOCAL AUTHORITY CARE

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ABSTRACT

Background: The concept of resilience has been used to explore risk and positive adaptation amongst groups of people experiencing adversity in an attempt to identify protective factors that enable them to succeed despite the odds. This study asked young people with experience of LAC for their views of what helped and hindered them and applied a resilience framework to interpret the findings.

Aims: To establish to what extent young people with experience of LAC would demonstrate risk and positive adaptation factors highlighted in previous research. To establish specific actions or events that young people found helpful/unhelpful particularly in relation to the services they received from the local authority. To identify resilience amongst participants and establish whether their responses were significantly different from less resilient participants. To explore patterns of resilience.

Sample: Fifteen young people aged 12 – 18 with experience of LAC.

Method: Semi-structured interviews were conducted using a time line as a process for engaging young people and rating scales on key factors identified from previous research. Frequency charts were used to demonstrate evidence of risk and positive adaptation and to record the views of what young people found helpful/unhelpful. Differences in responses between resilient and less resilient young people were analysed using the Kolmogorov-Smirnov two-sample test (KS test) of differences in distributions. A time chart was used to explore patterns of resilience.

Results: The participants' demonstrated risk and positive adaptation in many areas identified in previous research. They identified specific actions or events that were helpful or unhelpful in the services they received from the local authority.

Conclusion: Resilience can be identified in young people with experience of LAC using a risk and protective factors framework. Differences in resilience appear to be related to the accumulation and number of risk and protective factors rather than any one single factor. An increase in protective factors and decrease in risk appears to be strongly linked to significant life events which can provide turning

points for young peoples' development. There was also evidence of resilience as a developmental progression.

LITERATURE REVIEW

Background and purpose

Research into what promotes resilience amongst people with experience of LAC has focused on retrospective views of adults and there are few in depth studies that analyse young people's views. The initial aim of this research was to identify what young people found helpful/unhelpful from the services they receive in enabling them to adapt positively to highly stressful circumstances. To what extent would they demonstrate risk and positive adaptation in areas highlighted in previous research? Would it be possible to clearly identify young people who demonstrated resilience and if so would those who demonstrated resilience differ significantly from those who did not in the factors they identified? Additionally how might resilience best be understood in the light of their views?

An opportunity to conduct this study occurred when a local authority decided to undertake a crosscutting best value review of services to young people aged 12 – 19 years experiencing difficulties. The main participants in this review were to be the young people themselves. Twenty-five participants who had experience of LAC were to be part of the sample. As one of the consultants employed to undertake this work I devised the interview schedule based on resilience research into risk and protective factors related to systems and environments and interviewed the majority of young people with experience of LAC. Overall the study involved reporting on general themes that emerged from the entire sample. The more detailed analysis of the data and findings from the young people with experience of LAC was conducted only as part of this research study and not as part of the best value review for the local authority.

The identification of factors that young people viewed as helpful/unhelpful could potentially lead to a greater understanding of how effective the local authority services were in increasing protective factors and reducing risk to meet the needs of this vulnerable group of young people. It may also add support to the research already conducted in this area as well as contribute towards the debate on the nature and usefulness of resilience as a construct.

The concept of resilience

In the simplest of terms resilience refers to positive adaptation to significant risk. However, this concept has been used by in many different ways. It is important to have some understanding of how resilience as a concept has developed in order to be clear about what is meant by resilience, risk and positive adaptation; the methodological issues related to studying resilience and the theoretical frameworks underpinning the concept.

Historically studies of risk factors developed from research into substance misuse, however focusing on risk alone was not as fruitful as it might first appear because "the majority of high risk children and adolescents do not use illicit drugs or become drug abusers" (Leshner 1999). Further, risk factors seem to relate more to broad developmental outcomes than specific outcomes. Few theories now assume a direct correspondence between a risk factor (e.g. drug use in adolescence) and specific problem behaviour (drug addiction) and those that do are not highly regarded. Another difficulty with the risk approach is that even when identified, many risk factors such as poverty, family dysfunction, abuse and/or personal attributes are not easy to change.

There has, therefore been a move towards studying what keeps high-risk individuals from engaging in problem behaviours and naming these as protective factors. Studies of resilient individuals who have surmounted seemingly overwhelming difficulties have also provided insights into the interaction between risk and protective factors. Some interventions have begun to focus on increasing protective factors as in many cases it is more realistic to do this than to eliminate risk.

Norman Garmezy is generally cited as being the founder of contemporary research into resilience (Rolf 1999: 5). He initially studied resilience amongst schizophrenics and then "decided to focus on children who despite impoverished backgrounds were manifestly competent" (Rolf 1999: 7). Garmezy emphasises the need to extend the study of resilience from looking at single great stressors in people's lives because "the culmination of stressors in the environment, the family

and the background all add up to generate negative events and circumstances" (Rolf 1999: 8). He clearly states that the task of the researcher is to "begin with the stressors and then look to the adaptive versus non-adaptive groups of children. Then, move back into the world of the child, particularly in the context of the family, in order to see all the things that separate these two groups" (Rolf 1999: 11).

Whilst Garmezy's research broadened, other investigators began using the concept of resilience to explore multiple adverse conditions such as socio-economic disadvantage and associated risks (Garmezy, 1991, 1995; Rutter, 1979; Werner and Smith, 1982, 1992), parental mental illness (Masten and Coatsworth, 1995, 1998), maltreatment (Beeghly and Cicchetti, 1994, Cicchetti and Rogosch, 1997; Cicchetti, Rogosch, Lynch and Holt, 1993; Morgan and Eckenrode, 1992) and urban poverty and community violence (Luthar, 1999, Richter and Martinez, 1993). This research focused on a systemic search for protective forces that differentiated healthy adaptation/resilience profiles as opposed to comparatively less adaptive/resilient profiles.

Whereas earlier research had focused on personal qualities and attributes of resilient individuals this systemic approach began to include aspects of families and characteristics of wider social environments. This led to a shift "away from identifying protective factors to understanding underlying protective processes " (Luther et al 2000: 544). In other words the focus was more on *how* protective factors contribute to positive outcomes. The current evolving research is now indicating: "positive adaptation despite exposure to adversity involves a developmental progression, such that new vulnerabilities and/or strengths often emerge with changing life circumstances" (Luther et al 2000: 544).

This development of resilience as a concept has led to much debate about its usefulness. However in a recent critical evaluation Luthar et al (2000) concluded that despite having "serious conceptual and methodological pitfalls ... work on resilience possesses substantial potential for augmenting the understanding of processes affecting at-risk individuals" (Luthar et al 2000: 533). They go on to be specific about what researchers need to take into account when studying resilience:

- Clarity and consistency in definitions and use of terminology - specifically the need to define risk and positive adaptation and how they are being measured
- Acknowledgement of the multi-dimensional nature of resilience -specifically the need to be clear that where positive adaptation may be evident in one area (e.g. educational resilience as measured by attendance and/or attainment) this does not mean that significant difficulties may not be present in other areas (e.g. attachment and relationship)
- Theoretical considerations - specifically researchers are urged to present their studies within a clear theoretical framework (e.g. triarchic, ecological, transactional, organisational) and to relate their findings to related theories of developmental processes that may be specific to the adversity under study (e.g. attachment theory, child development)
- Attention to issues of stability and conceptual consistency - specifically when findings are based on small numbers limits to the stability of the findings must be clearly stated. Researchers need to acknowledge the dynamic developmental nature of resilience as a construct.

The starting point for any study should therefore begin with clear definitions of the terminology.

Definition of Resilience

Defining resilience simply as 'positive adaptation to risk' does not allow the reader to know whether resilience is being interpreted as a personality trait, a process or a descriptive outcome. The definition widely quoted in the literature is that resilience represents "the process of, capacity for or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best and Garmezy 1990 p 426). This definition recognises that resilience is likely to be an outcome of the interaction between the person and environmental factors. This definition will be used throughout this study.

Definition of Risk

What exactly is the individual demonstrating resilience against? The challenging or threatening circumstance that the individuals in this study may demonstrate resilience against is being taken into care of the local authority. More specifically, being placed in either foster care and/or residential care before the age of sixteen years and having a current status of being 'in care' or 'leaving care'.

How can we be sure that experience of LAC is a significant risk factor? Evidence of risk for this group can be found in the research detailing outcomes for children and young people with experience of the care system.

Evidence of Risk

There was little evidence of what the outcomes for children looked after were until quite recently. Sonia Jackson highlighted the issue of poor educational outcomes for young people in public care in 1987 (Jackson 1987) but little attention was given to addressing the issue. In 1994 an overview covering two decades of research on the subject contained just 27 references (Children's Bureau 2000). Controversy over allegations and convictions for abuse to young people whilst in care led to increased government attention and recommendations (Utting Report 1997). The publication of guidance on the education of children in public care (DfEE 2000) has raised the awareness and importance of taking effective action to overcome the findings that the overall educational achievements of this group of young people are significantly low in comparison to the general population with an estimated 75% of children in public care leaving care with no educational qualifications (DfEE 2000). The most recent figures produced by the Department of Health (2001) show some improvement on these figures but there continue to be big discrepancies between children in the general population and those in care/leaving care as shown in Table 2.1.

Table 2.1 – Educational Achievements of Care Leavers and the General Population

At least 1 GCSE or GNVQ		5 or more A*- G GCSEs		5 or more A*- C GCSEs	
Leaving Care	General Population	Leaving Care	General Population	Leaving Care	General Population
37%	95%	24%	89%	5%	49%

Government recommendations now include statutory guidance to improve local authority practices including Personal Education Plans, designated teachers, sharing information and securing educational placements to ensure that education is made a priority for these young people (DfEE 2000).

Other stark facts about the underachievement and social exclusion of children and young people in the public care system include the following:

- Fewer than 20% go on to further education and fewer than 1 in 100 go to university compared to 68% of the general population (Biehal et al 1995)
- Children in care are 10 times more likely to be excluded from school than their peers, as many as 30% are out of mainstream education because of either truancy or exclusion (Social Exclusion Unit 1998)
- Between 50% and 80% are unemployed between the ages of 16 and 25 (Scottish Executive January 2000)
- Up to 50% of those placed by the courts in secure accommodation come from a looked after background (Ofsted 2001 paragraph 1.8)
- Up to 96% of young people in public care have psychiatric disorders (McCann 1996)
- 40% of teenage girls in prison custody had been in care (Russell 1998)

With increasing documented evidence of poor outcomes there can be little doubt that experience of LAC confers significant risk. So how could one define positive adaptation to such risk?

Definition of Positive Adaptation

Demonstration of at least normal or average functioning in at least one area of development is seen as one definition of positive adaptation. Luther et al (2000) state that when the stressors are severe then "the maintenance of near average

functioning should suffice" and when risks are generally moderate the "evidence of superior functioning may be required to justify labels of resilience" (Luther et al 2000: 549). Although this may appear straightforward it is necessary to consider the subjective and culturally biased minefield that is being entered when attempting to label a young person's response as at least normal or average. The professional view of positive adaptation may be very different from the young person's view for example, teenage pregnancy. The professional view would be that teenage pregnancy is not a positive outcome whereas a young person may see this as their way of meeting their own needs for belonging, achievement and opportunity to make a major choice in their lives, plus which it may seem at least normal or average functioning within the group of young people they identify themselves with.

There is no way out of this dilemma other than recognising it. So if average to normal functioning can be accepted as the definition, which area of development should be used to measure and demonstrate evidence of positive adaptation?

Evidence of Positive Adaptation

One very simple straightforward measure of positive adaptation for young people in public care is educational attendance and/or attainment. It has already been demonstrated that this group are at extreme risk of exclusion, truancy and leaving school with no qualifications. However, this raises the issue identified by Luthar et al (2000) concerning to what extent positive adaptation in one area can be said to be indicative of positive adaptation in all areas? For example, whilst individuals may demonstrate educationally positive adaptations by their attendance and/or attainments they may still experience difficulties in other areas such as maintaining positive relationships. Previous studies have been highly criticised when researchers who demonstrate positive adaptation in one, sometimes very narrow area, claim this is as evidence of resilience overall. Whilst Luther et al (2000) agree that it is "unrealistic to expect any group of individuals to exhibit consistently positive or negative adjustments across multiple domains that are conceptually unrelated" researchers should "avoid overly global statements while describing their findings" (Luther et al 2000 p554).

Having defined and provided evidence of risk and acknowledged that one potential measure of positive adaptation relates to the attendance and/or attainments of young people in public care it is important to learn from previous research which potential risk and protective factors may affect the outcomes for young people. As Luther et al (2000) point out, once a researcher has established the presence of high risk it is "entirely logical – indeed, worthwhile – to try to determine the factors associated with relatively positive child outcomes" (Luther et al p550) as well as to examine the process of how risk factors affect vulnerability.

Risk and Protective Factors

Garmezy strongly advocates for all disciplines to be involved in studying resilience and for researchers in different fields to learn from each other (Rolf 1999). Examples of studies and theories form different perspectives have therefore been chosen to gain an overview of current knowledge.

From an educational perspective a well-known study by Jackson and Martin (1998) looked at what factors promoted resilience in successful adults who had been through the care system. They defined successful adults as having a professional career, their own home and being in a long-term relationship. They found that the protective factors "identified as most strongly associated with later educational success" were:

- Stability and continuity
- Learning to read early and fluently
- Having a parent or carer who valued education and saw it as the route to a good life
- Having friends outside care who did well at school
- Developing out-of-school interests and hobbies (which also helped to increase social skills and bring them into contact with a wider range of non-care people)
- Meeting a significant adult who offered consistent support and encouragement and acted as a mentor and possibly a role model
- Attending school regularly

The risk factors that emerge from their study (not specifically listed) include in-care experience of:

- No-one taking an interest in what went on at school
- Difficulty getting educational aspirations recognised
- Care workers not valuing education
- No facilities or informed help for homework
- Lack of access to educational resources including books
- Being moved at times disruptive to their education
- Lack of careers advice
- Lack of funding for further and higher education

Jackson and Martin's work provides a useful starting point for further research, for example, would young people still in the care system highlight the same risk and protective factors? Would there be significant differences between resilient and less resilient young people in their experiences of risk and protection?

From a psychological perspective a compelling study used resilience as a framework for studying disadvantaged youth in Chicago (Smokowski et al 2000). 86 inner-city high school students wrote autobiographical essays that were analysed using a qualitative approach (content analysis) to understand protective factors young people considered important in overcoming adversity. The researchers were also interested in resilience as a process, attempting to "illuminate the complex interplay between risk and resilience" (Smokowski et al 2000: 429). They used Werner's (1989) model of resilience and looked for evidence of individual attributes, family ties and external supports on positive adaptation. Their findings indicate that "resilience as a process entails a consistent struggle over time" (p 435).

Internal attributes such as optimism about the future, expectations and goals, perseverance and determination, experience of achievement in the past and being able to learn from other peoples' behaviour appeared to be "important internal ingredients in the resilience process" (p444). Avoiding falling into the same risk taking behaviour as family or friends appeared to be a constant struggle.

Transitional events appeared to be crucial times when young people were particularly susceptible to changing their behaviour positively or negatively.

Support from family members, particularly mothers was frequently reported. The researchers called the support that appeared to be most valued "motivational support" – "a straightforward information-giving concerning environmental risks the child must face" (p439) with encouragement and positive role modelling. This support was frequently reported to be provided by teachers and, at times, peers. The "dynamic interactions among internal attributes, familial ties and external support systems seem to enhance the individual process to overcome adversity. Perseverance, determination and future optimism were reported alongside supportive relationships with parents, teachers and at times, peers" (p446). They suggest that we need more qualitative and quantitative research "to map the exact causal pathways in the development of resilience" (p446).

From a mental health perspective in a recent publication by Young Minds (2002) risk and protective factors are listed using the same triarchic model of resilience (Werner 1998). Table 2.2 provides an overview of the factors identified from mental health research.

Table 2.2: Risk and protective factors listed in "Young Minds: Looking after the metal health of looked after children" (Young Minds 2002)

	Risk factors	Protective factors
Child	• Genetic influences • Low IQ and learning disability • Specific developmental delay • Communication difficulty • Difficult temperament • Physical illness, especially if chronic and/or neurological • Academic failure • Low self esteem	• Being female • Higher intelligence • Easy temperament as an infant • Secure attachment • Positive attitude, problem solving approach • Good communication skills • Planner, belief in control • Sense of humour • Religious faith • Capacity to reflect
Family	• Overt parental conflict • Family breakdown • Inconsistent or unclear discipline • Hostile and rejecting relationships • Failure to adapt to child's changing developmental needs • Abuse – physical, sexual and/or emotional • Parental psychiatric illness • Parental criminality, alcoholism and personality disorder • Death and loss – including loss of friendships	• At least one good parent-child relationship • Affection • Supervision, authoritative discipline • Support for education • Supportive marriage/absence of severe discord
Environment	• Socio-economic disadvantage • Homelessness • Disaster • Discrimination • Other significant life events Pearce, 1993 in NHS HAS (1995)	• Wide supportive network • Good housing • High standard of living • High morale school with positive policies for behaviour, attitudes and anti-bullying • Schools with strong academic and non-academic opportunities • Range of positive sport and leisure activities Peter Hill in Bright Futures (2000)

From a social work perspective Gilligan (2000) supports the view that there "may actually be much to learn from finding out why those children who do well actually do well, despite having difficult home or other life circumstances" (Gilligan 2000: 37). He argues the importance of adopting a resilience led approach to developing policy and practice in respect of children in need especially in relation to the resilience enhancing potential of school experiences and spare time activities. Gilligan quotes a range of studies to highlight five key concepts he has

identified as necessary to understanding resilience in children growing up in adversity:

1. Reducing the stockpile of problems – the cumulative negative impact of adversities (Rutter 1990) and the assertion that reducing the accumulation of problem areas seems to reduce the risk of later problems (Stattin and Magnusson 1996) indicates that "if intervention can reduce the number of problems and build the number of strengths then it may have a very positive effect" (Gilligan 2000: 38).
2. Pathways and turning points in development – "one favourable experience may be a turning point in a child's or young person's trajectory or development (Clausen 1995)"
3. A secure base – secure attachments provide the child with a secure base from which to explore the wider world (Bowlby, 1998). "A young person's sense of secure base is cultivated by a sense of belonging within supportive social networks, by attachment type relationships to reliable and responsive people, and by routines and structures in their lives" (Gilligan 2000: 39). Werner and Smith's (1992) study is quoted as evidence of the benefits of relationships with teachers and other interested adults for young people doing well despite stressful home circumstances.
4. Self-esteem/self-worth – Rutter (1990) is quoted as identifying two types of experience which seem most important in influencing self-esteem: (a) secure and harmonious love relationships and (b) success in accomplishing tasks that are identified by individuals as central to their interests. Even one positive relationship and/or success in something the person values "may do much to combat a sense of failure in other spheres of one's life" (Gilligan 2000: 41).
5. A sense of self-directedness or self- efficacy: A study by Sandler et al (1989) is quoted as having identified parents' belief in children's' sense of self-control, responsiveness, warmth/praise, support and encouragement to engage in his/her environment as factors that promote

> self-directedness. Gilligan argues that there are many opportunities where child welfare professionals can consciously help young people in adversity develop a sense of self-efficacy "not least by involving them in the planning process in relation to their own care" stressing that "a sense of purpose, a sense of direction, a sense of where things are leading is very important to young people in troubled circumstances (Dowling 1993)" (Gilligan 2000: 41).

Gilligan's recommendations include recognising the potential of teachers as confidants and mentors and the protective value of positive educational experience (Gilligan 1998). He strongly supports the development of close links between home and school to actively work to overcome the findings of one study where only 10% of reviews for children in care were attended by educational personnel (Horgan and Sinclair 1997). He argues that "non-school professionals" and caregivers need to show an interest in all aspects of school life including the need to prioritise continuity of school placement rather than changing schools because of changes in care placement. He challenges the assumption that schools need to wait for a young person's emotional problems to be sorted out because regular attendance at school, in itself, is therapeutic and often offers an "escape route from an exclusively in need/care identity or from otherwise consuming effects of loss separation and abuse" (Gilligan 2000: 42). He also recommends developing spare time experiences including cultural pursuits, sport, care of animals, helping and volunteering and part-time work.

Theoretical frameworks of resilience

The theoretical frameworks used in other research are not always evident. The educational perspective reflected in Jackson and Martins' study and government documentation appears to focus primarily on identifying risk and protective factors. The psychological and mental health perspectives adopt the triarchic model of resilience and explore interactions between the child, family and environmental factors. The social work perspective appears to reflect a combination of theoretical models with a predominantly systems approach being recommended for improving outcomes.

Luther et al (2000) recommend, "future empirical studies of resilience must be presented within cogent theoretical frameworks" (p 555). The theoretical framework adopted for this study is largely systemic. As part of a broader review of council services to young people in difficulties the systems approach of looking into what young people felt had been helpful/unhelpful in terms of the support they had received was not heavily focused on within child factors but more on how system factors interacted with environmental factors to facilitate positive outcomes. In order to further operationalise resilience specific potential risk and protective factors identified in the literature which related to environments and systems have been collated under six broad headings (Table 2.3).

This provides a framework for exploring the main research questions:

- To what extent do young people with experience of LAC demonstrate risk and positive adaptation in areas highlighted in previous research?
- What specific actions or events related to these do young people find helpful/unhelpful particularly in relation to the services they received from the local authority?
- Is resilience identifiable and would there be any significant differences between resilient and less resilient young people?
- How is resilience best understood in this context? Is resilience dependent on specific factors and/or the interaction between factors? Is it dependent upon single life events and/or a process of development over time?

Table 2.3: Risk and protective factors relating to environments and systems identified in previous research[1]

THEME	RISK FACTORS	PROTECTIVE FACTORS
Stability and continuity	• Moves of home • Moves of school especially being moved at times disruptive to education • Lack of transport to maintain continuity of school placement • Poor attendance at school	• Few moves in home or school • Planned moves with education secured • Transport provided to maintain continuity of school placement • Good attendance at school
Facilities	• No facilities or informed help for homework • Lack of access to educational resources including books • Lack of access to leisure services • Lack of funding for further or higher education	• Access to books, libraries, study centres, ICT • Access to leisure, after school events, social activities • Developing out of school interests and hobbies
Friendships, belonging at home and school	• Bullying • Abuse • Harassment	• Having supportive friends who can be trusted
Significant adults who take an interest in education and offer consistent support	• Lack of significant adult support • No-one taking an interest in what went on at school • Parents/carers not valuing education	• Having a parent/carer who values education and provides motivational support • Meeting a significant adult who offer consistent support and encouragement (often a teacher or support worker) and are clear messages about dangers and consequences of risk taking behaviours
Information sharing and involvement in decisions	• Schools/parent carers not informed of issues relating to school/home/care • Services not working together • Young person feel they have no control over decisions being made • Confidentiality issues not resolved	• Shared care and education plans • Regular contact between education and parent/carers • Services aware of what overall plans for young person are and how they fit into that plan
Achievements, expectations and aspirations for the future	• No sense of achievement in any area • Difficulty getting educational aspirations recognised/low expectations • Lack of information on future options e.g. careers advice	• Experience of achievement in any area (not necessarily academic) • Personal goals, motivation and aspirations • Optimistic expectations about the future • Information on future options e.g. careers advise

[1] Sources: Jackson and Martin (1998), DfEE (2000), Gilligan (2000), Smokowski et al (2000)

METHODOLOGY

The Sample

The sample consisted of young people who had experience of living in LAC and had been identified by a council service as being willing and able to take part in an interview as part of the wider best value review. Twenty-five young people were identified to be interviewed however; only fifteen interviews took place due to non-attendance. Table 3.1 provides an overview of which services were involved in identifying young people to take part.

Table 3.1: Numbers of young people with experience of LAC identified by council services

Identifying service	Number of young people identified	Number of young people interviewed
Leaving Care Team	5	3
Looked After Children Team	15	6
Looked After (Residential)	5	2
Youth Offending Team	0	2
Substance Misuse Team	0	2
Total	25	15

It was possible to include young people identified by the youth offending team and substance misuse team because they had experience of LAC. In most instances the identifying service was able to provide pre-interview summaries of the young people. (See Appendix 1 for a copy of the pro forma used to collect pre-interview information).

Ten participants were female and five male ranging from 12 to 18 years of age. All but one of the young people had experience of living in at least one foster care placement, nine had lived in two or more foster placements and seven had experience of being looked after in one or more residential community homes.

Two young people had transferred to special schools for children experiencing emotional and behavioural difficulties one at Year 7 and another at Year 9. One was currently without a school place following exclusion from a mainstream school, one was receiving alternative provision in the form of home

tuition and work experience and the remaining eleven were all attending or had attended mainstream schools. Seven had left school at the time the interviews took place i.e. at the end of Year 11. Table 3.2 provides an overview of the sample.

Table 3.2: Details of each participant on gender, age, previous and current educational and care placements

Interview	Gender	Age/school year	Educational Placement	Care Placements
1	Female	18/school leaver	Mainstream	Fostered now independent
3	Female	18/school leaver	Mainstream	Residential now supported living
8	Female	18/school leaver	Mainstream	Fostered now independent
2	Female	18/school leaver	Mainstream	Fostered now independent
12	Male	17/school leaver	Special at year 7	Fostered and residential now parents home
5	Female	16/Year 11 school leaver	Mainstream then home tuition	Fostered Now parents home
6	Male	15/Year 11 school leaver	Special at Year 9	Fostered Now residential
7	Male	15/Year 10	Mainstream	Fostered Now residential
9	Male	15/Year 10	Mainstream	Fostered
11	Female	15/Year 10	Mainstream now home tuition and work experience	Residential Now fostered
4	Male	14/Year 10	Mainstream	Fostered
14	Female	14/Year 9	Mainstream	Fostered
15	Female	14/Year 9	Mainstream	Fostered
10	Female	12/Year 8	Mainstream	Fostered
13	Female	12/Year 8	Mainstream now without a school place	Residential

Data Collection

Semi-structured individual interviews took place in a range of settings (e.g. home, school, connexions office), wherever it was most convenient for the young person. All participants were given basic information about the purpose of the interview and assured that it was voluntary and confidential (Appendix 2). The researcher conducted ten interviews and two co-workers conducted five.

The interview schedule (Appendix 3) consisted of a series of prompts developed from the risk and protective factors outlined in Table 2.3. The interview schedule was revised after the first day of interviewing when it was possible for the three interviewers to meet and discuss the interview schedule. Earlier piloting had not been possible due to time constraints, which were exacerbated by co-working. Fortunately the participants who formed the sub-sample for this study were not interviewed until day two.

In order to provide a framework for the interview and a meaningful focus for the young people timelines were used as a process tool. This enabled the interviewer to draw participants' attention to key moments in their lives and use the prompts to explore what they had found helpful/unhelpful. The interviews usually began with drawing a timeline and asking young people about their achievements and times when they had been at their best. Their responses were recorded in note form on the timeline so the young person could see what was being written. They could also see the list of prompts, which were explained to them as factors we already know about that can make a difference in helping/hindering positive outcomes for young people experiencing difficulties. Participants were then encouraged to tell their stories with prompts being used where appropriate. The prompts were not always used in the same order for every interview although most interviews began with achievements and ended with aspirations and any other issues.

In most cases this format generated a lot of information about the young people, comments on their circumstances and use of the services provided. Most key prompts were accompanied by rating scales with participants being asked to rate items on a Likert scale of 1 to 5 where 1 was very low, and 5 very high.

A written summary of key points on the timeline was made of each interview and comments and ratings for each prompt were also recoded (An example of the summary interview notes is presented in Appendix 4).

Data Analysis

Descriptive statistics in the form of frequency charts were used to demonstrate evidence of risk and positive adaptation and to record the views of what young people found helpful/unhelpful.

Participants' reports on their attendance, achievements and aspirations were used to group respondents into two groups one classified as clearly demonstrating evidence of resilience (resilient group) and another as demonstrating much less clear evidence of resilience (less resilient group) at the time of interview (Appendix 5). Clear evidence of resilience was characterised by the presence of three or more of the following:

- Above average attendance overall or increased levels of attendance in education from non/low to high
- Average to above average levels of attainment in SATs and/or GCSE's (either actual or expected)
- Positive view of self
- Overcome dependency on drugs or alcohol
- Positive plans for the future in relation to education and/or employment

Much less clear evidence of resilience was characterised by the presence of three or more of the following:

- Low levels of attendance in education
- Low attainments in SATs and/or GCSEs (either actual or expected)
- Negative view of self
- Involvement in criminal activity and/or dependency on drugs or alcohol
- Unclear plans for the future in relation to education and/or employment

Differences between the two groups were examined using the Kolmogorov-Smirnov two-sample test (KS test), which is a non-parametric test chosen because the data was not drawn from a normal distribution. The KS test is less well used than Chi-squared "specifically designed to test hypotheses about category data" (Kranzler and Moursund 1999: 120) which could not be used because "generally studies utilising Chi-squared will require relatively large numbers of subjects … a

very conservative rule of thumb is that *fe* (expected frequency) must always be equal or greater than 5" (Kranzler and Moursund 1999: 125).

The KS test determines differences in distribution and is described as a general test that is sensitive to all kinds of differences between populations (Gibbons 1976). The null hypothesis is that the distributions of the two samples are identical. The variable needs to be at least ordinal which would apply to data on age, number of care placements and ratings scale data. Appendix 6 provides additional details of this test and whilst the sample could not be considered as random it provides the 'best fit' test for the data collected.

This analysis did not allow for an exploration of interactions between factors or resilience as a process. Reported risk and protective factors were then recorded on a time chart to investigate if there were any other numerical or statistical patterns to the data that could be explored further. Table 3.3 provides an example of how the data was organised. This led to further descriptive statistical analysis. Appendix 7 contains the complete time chart data.

Table 3.3: Example of Time Chart data of reported risk (red) and protective (blue) factors

14 Resilient	➢ Brother near fatal accident ➢ Granddad died ➢ Not sleep or eat ➢ Parents physically abusive ➢ Taken into care ➢ Attendance (1)	➢ Acting out in school (1) ➢ Excluded from school ➢ Social worker (3) rarely saw them ➢ Several care placements ➢ Attendance (1)	➢ Acting out in school (1) ➢ Several care placements ➢ Poor attendance (1)	➢ Good foster placement (5) ➢ Moved to good school (5) ➢ Looked after team (5) ➢ Attends youth club, careful who trusts ➢ Good attendance (5) ➢ One day a week at FE ➢ Plans to do NNEB course ➢ Strong link with brother (5) who recovered

RESULTS

Stability and Continuity Factors

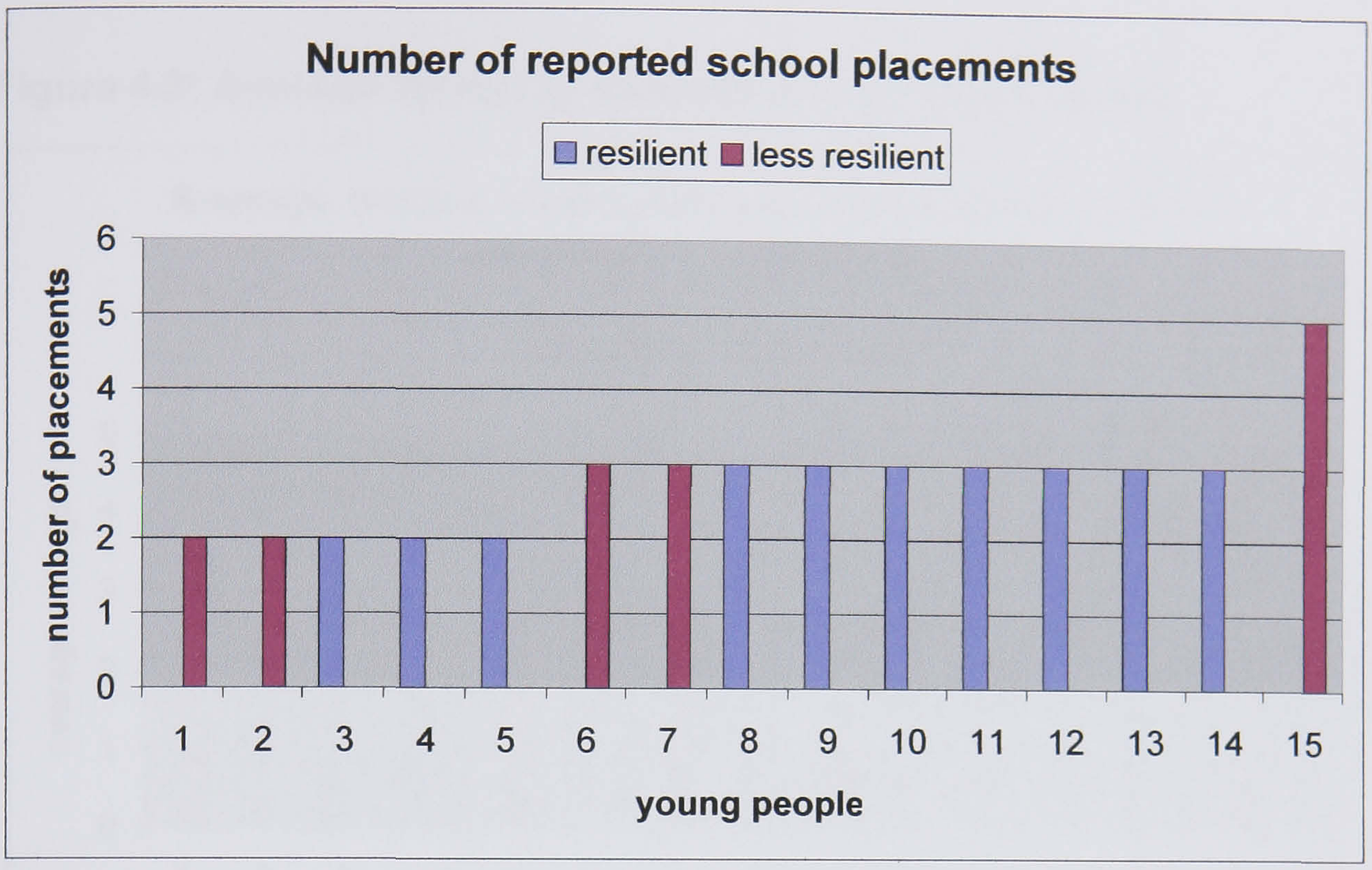
Figure 4.1: Number of reported care placements to date

The number of care placements ranged from one to twelve. Almost two thirds of the participants (9) had two or three care placements.

Table 4.1: Result of KS test on reported number of care placements

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Number of care placements	0.74	0.89	0.4	**No**

Figure 4.2: Number of reported school placements

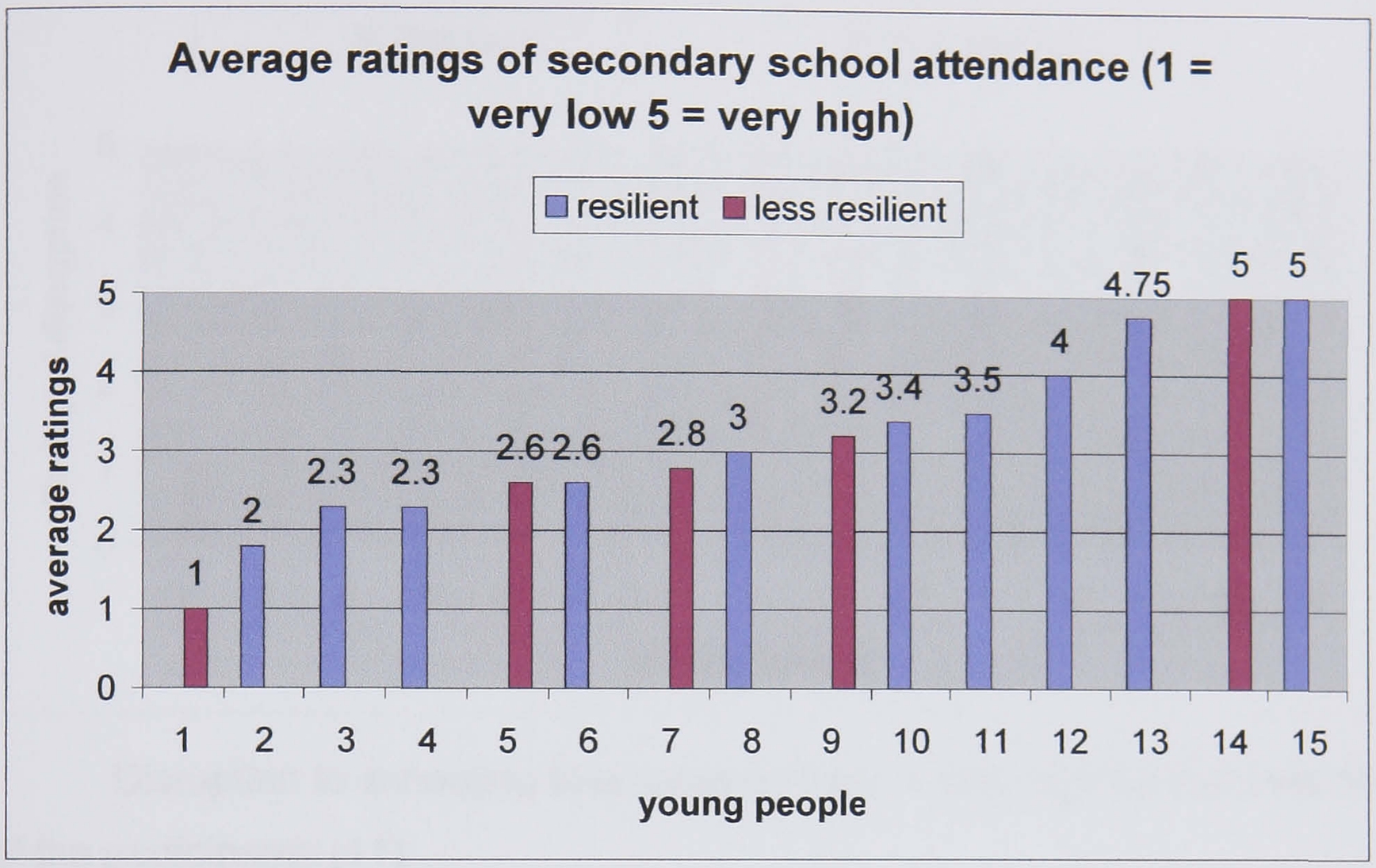


The number of school placements ranged from two to five. Almost two thirds of the sample (9) had three school placements.

Table 4.2: Result of KS test on reported number of school placements

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Number of care placements	0.74	0.89	0.2	**No**

Figure 4.3: Average ratings of secondary school attendance

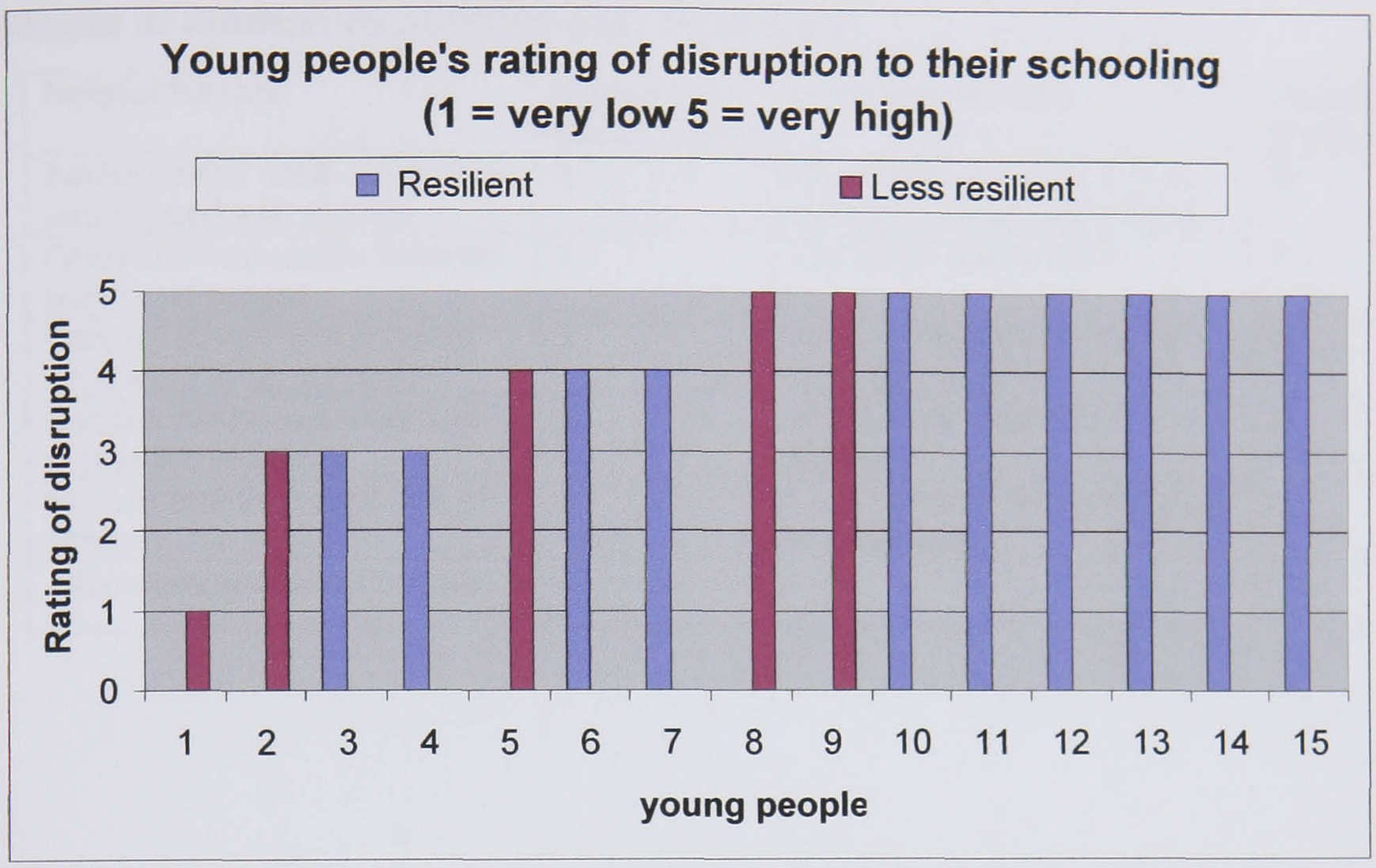


Ratings of average secondary school attendance were below average for just over half of the participants (8) and above average for just under half (7). Six participants increased their attendance from a very low to very high rating. Five reported this was due to being placed in a good foster home and one attributed this to having good careers advice.

Table 4.3: Result of KS test on average ratings of secondary school attendance

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Average rated attendance at Secondary	0.74	0.89	0.3	**No**

Figure 4.4: Young people's rating of disruption to their schooling



Disruption to schooling was rated as high or very high by just over two thirds of the participants (11).

Table 4.4: Result of KS test on ratings of disruption to schooling

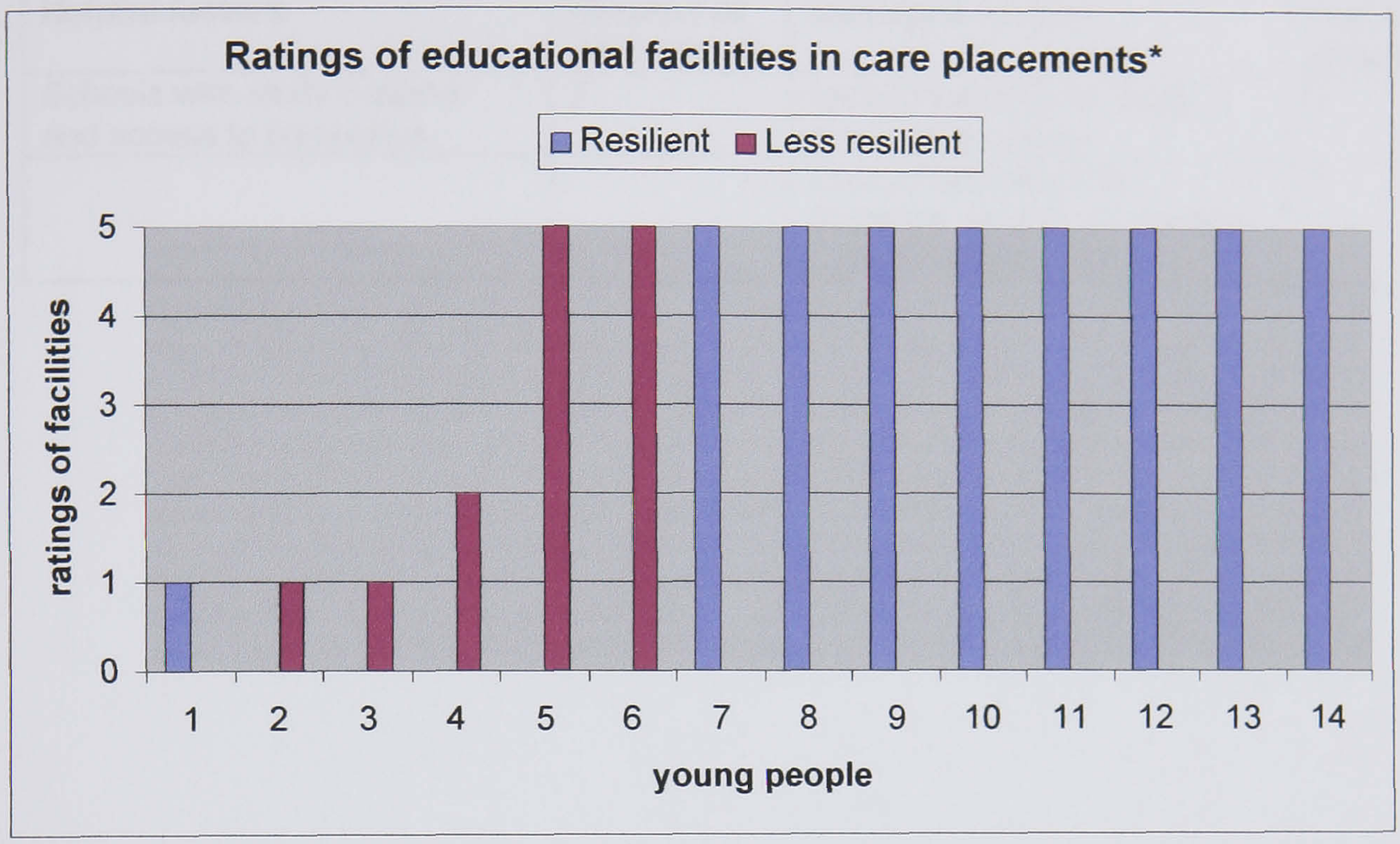
Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Ratings on disruption to schooling	0.74	0.89	0.2	**No**

Table 4.5: Most common helpful and unhelpful factors mentioned by young people in relation to stability and continuity

Helpful factors	Number of participants	Unhelpful factors	Number of participants
Foster carers value education and support with studies	5	No interest or support from carers in community homes	5
Good communication between home and school	3	Exclusion from school	5
Careers advice and knowing what want to do in future	3	Lack of friendships and or bullying in school	6
Support centre in school and supportive teachers	4	No parental interest in education	5
Friends and the social part of school	4	Lack of social worker interest in education	6
Alternative education options	2		

Facilities Factors

Figure 4.5: Ratings of educational facilities in care placements



*No data for one participant

Educational facilities in care placements were rated as very good by two thirds of the participants (10). Four participants rated facilities as poor or very poor and these related to facilities in community residential homes.

Five young people reported access to out of school interests and activities, which included youth clubs (2), army cadets (1), sport (1) and graphic design (1).

Table 4.6: Result of KS test on ratings of educational facilities in care placements

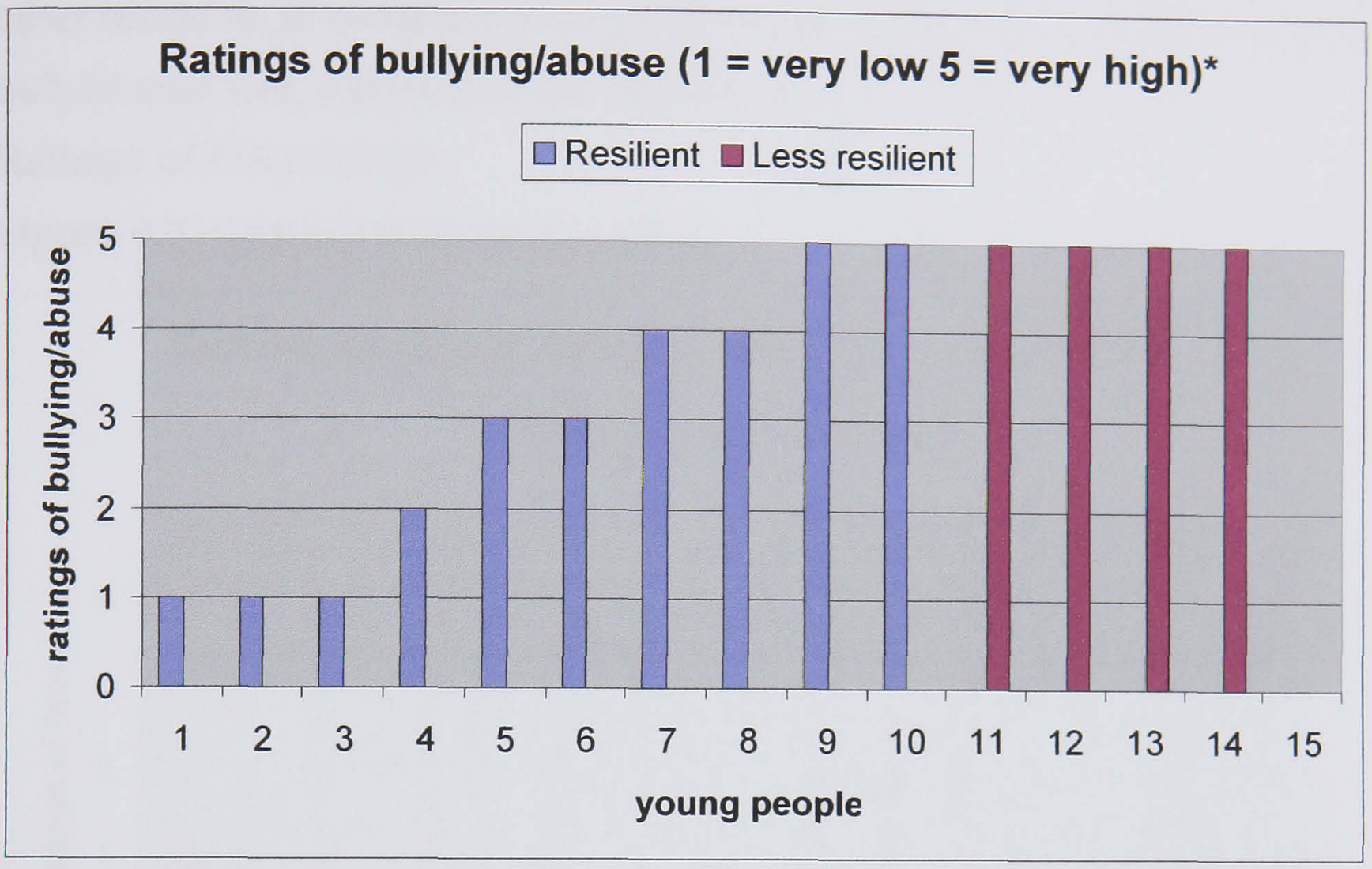
Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Ratings of facilities in care placements	0.8	0.96	0.48	**No**

Table 4.7: Additional most common helpful and unhelpful factors mentioned by young people in relation to facilities factors

Helpful factors	Number of participants	Unhelpful factors	Number of participants
Schools with study support and access to computers	7	Lack of facilities for study in community homes	5
		Lack of flexibility with transport, unable to stay after school for extra study	3

Friendships and Belonging Factors

Figure 4.6: Ratings of bullying/abuse



*No data for one participant

Bullying/abuse was rated as high or very high by just over half of the participants (8) and average or very low by just over one third (6).

Table 4.8: Result of KS test on ratings of bullying/abuse

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Ratings of bullying/abuse	0.8	0.96	0.8	**Yes**

Table 4.9: Places where bullying/abuse rated three and above was reported to occur

Place bullying/abuse occurred	Resilient	Less Resilient
School	2	1
Community home	1	1
School and foster home	1	0
School and parents home	1	1
Parents home and community home	1	0
Foster home and community home	1	1

Six participants reported bullying/abuse at home and school. Within the home environments the bully/abuser was reported to be a main carer, a sibling or other residents (if living in a community home). Within the school environment the bully/abuser was reported to be other pupils.

Ratings of Friendships

Figure 4.7: Current friendship ratings

Current friendships were rated as good or very good by the majority of the participants (12). Almost half (7) of the participants reported having difficulties with friendships in the past in terms of "hanging around with the wrong people".

Table 4.10: Result of KS test on current friendship ratings

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Current friendship ratings	0.74	0.89	0.2	**No**

Table 4.11: Additional most common helpful and unhelpful factors mentioned by young people in relation to friendships and belonging

Helpful factors	Number of participants	Unhelpful factors	Number of participants
Teachers who take bullying seriously	4	No effective action against bullying being taken in schools	5
Adults who respond to reports of bullying/abuse	3	Not being supported to make friendships with positive peers	4

Significant Adults Factors

Figure 4.8: Current number of adults rated positively (good or very good)

The number of adults currently rated as good or very good ranged from 0 to 6. Only one participant rated no adults positively stating that he did not trust any adult as they had "all let him down".

Table 4.12: Result of KS test on current numbers of adults rated positively

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Current number of adults rated 4 or 5	0.74	0.89	0.5	**No**

Table 4.13: Young peoples ratings of most frequently mentioned significant adults

Rating	Teacher		Social Worker		Family Member		Foster Carer	
	Resilient	Less Resilient	Resilient	Less Resilient	Resilient	Less Resilient	Resilient	Less Resilient
1 very bad	0	1	3	3	2	1	4	1
2 bad	1	0	1	0	0	0	0	0
3 middle	0	0	3	0	0	0	0	1
4 good	4	0	6	0	0	0	0	0
5 very good	4	2	2	2	4	2	8	3

Ratings of how supportive an adult was varied over time, for example, a social worker may be rated one in the past but five now or visa versa. Young people identified a range of different adults; teachers, social workers, family members and foster carers were the most frequently mentioned.

Very few (2) young people rated teachers as lower than four with the majority (10) rating at least one teacher as good or very good at some point in their education.

Almost half (7) of the participants rated a social worker as bad and two thirds (10) reported social workers as good at some point in their involvement with social services.

Three rated support from a family member as very bad and six as very good. Seven did not comment on the support they received from their family. The family member was not always a parent in two cases positive support was identified as being given by an older brother and in one case a grandparent.

Foster carers were generally rated either very bad or very good.

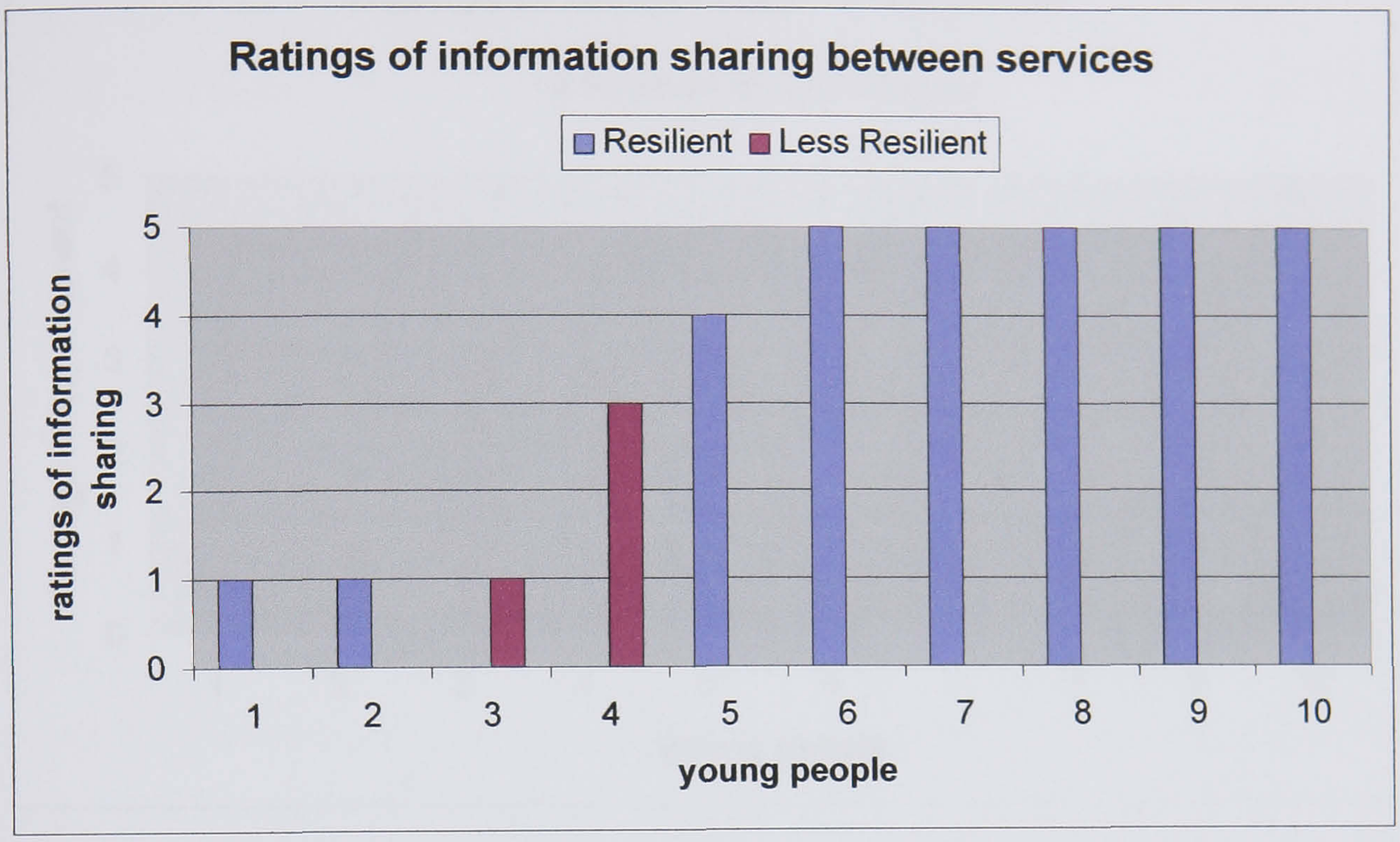
There was no significant statistical difference between the resilient and less resilient groups on ratings of significant adults, or average ratings of adults over time.

Table 4.14: Additional most common helpful and unhelpful factors mentioned by young people in relation to significant adults

Helpful factors	Number of participants	Unhelpful factors	Number of participants
Carers and teachers who have faith in you	5	Carers and social workers who are unreliable	5
Carers with firm but fair rules	2	Teachers who talk down to you	2
Social workers and teachers who listen and act on what young people say	5	Teachers who do not help with work and blame for things without evidence	2
Adults who show concern for your well being	2	Residential staff who are insensitive	4
Adults who will stand up for you and protect you	5	Adults who are not well informed	2
Adults who spend time with you	4		
Adults who provide practical support and information	5		

Information sharing and Involvement in Decisions Factors

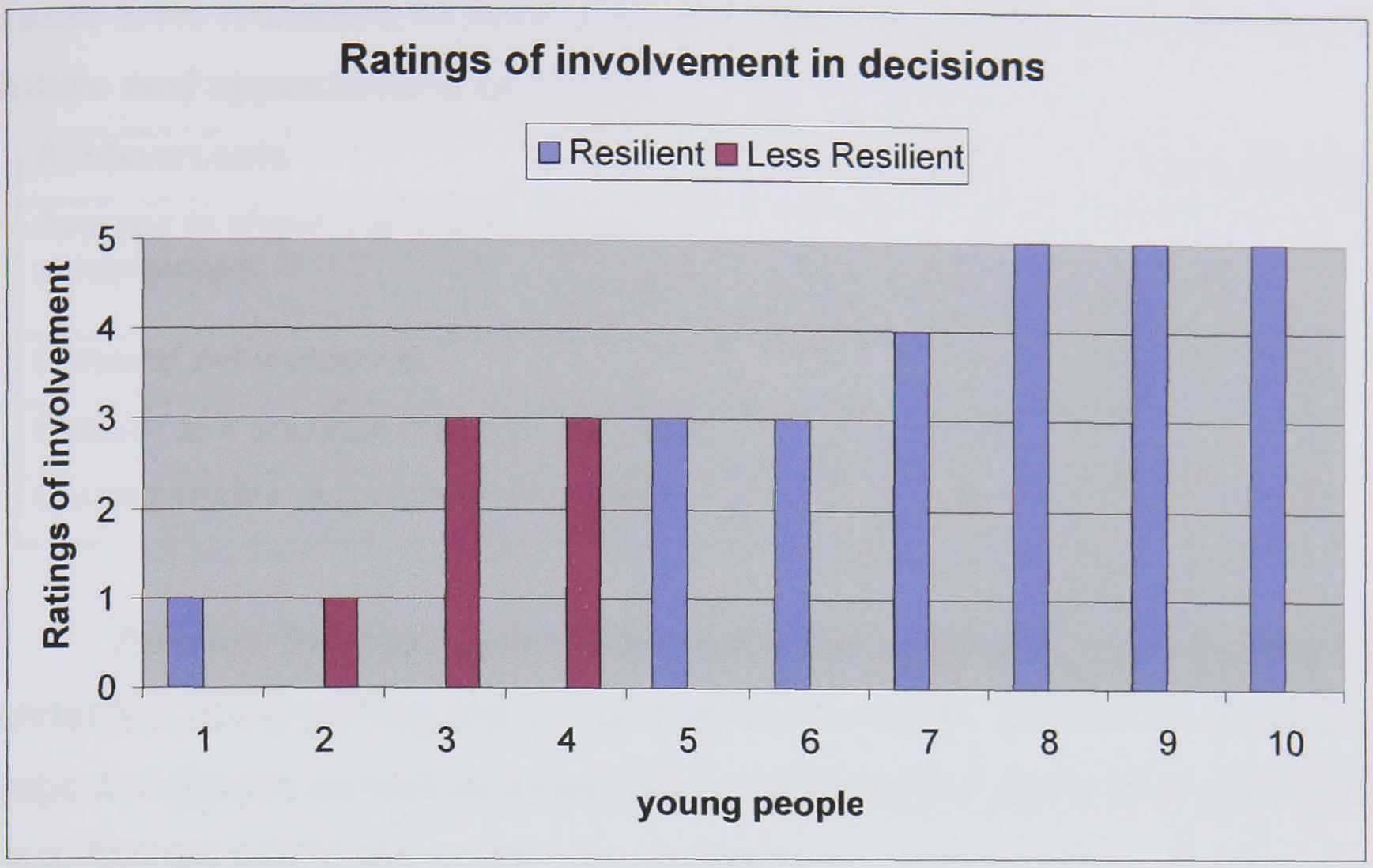
Figure 4.9: Ratings of information sharing between services*



*Data not available for 5 participants

Information sharing between services was rated as good or very good by one third of the participants (5), this usually referred to links between home and school including education being involved in social services reviews. There was not enough data to test for significant differences between the two groups.

Figure 4.9: Ratings of involvement in decisions*



*Data not available for 5 participants

Involvement in decisions was rated as average or above average by just over half of the participants (8). There was not enough data to test for significant differences between the two groups.

Table 4.15: Additional most common helpful and unhelpful factors mentioned by young people in relation to information sharing and involvement in decisions

Helpful factors	Number of participants	Unhelpful factors	Number of participants
Links between home and school	4	Too many people involved in reviews and decisions about your future	3
Adults who are careful about sharing sensitive information and negotiate on your behalf	3	Personal information being shared	3
Social workers acting on decisions made by young person	4	Being told you have a choice but then no-one acting on it	2

Achievements Expectations and Aspirations Factors

Table 4.16: Numbers of young people reporting achievements, plans for the future and expectations of others

Achievements	Resilient	Less Resilient
Average to above average academic achievements	7	0
Personal achievements	4	1
Positive and possible plans for the future	10	0
Current positive expectations by others	9	0

Average to above average academic achievements were reported by just under half of the participants (7) and related to GCSE and SATs achieved or expected grades as well as examples of attainment of alternative qualifications (e.g. first aid certificate, youth work grade 1).

Personal achievements were reported by one third of the participants (5) and included overcoming dependency on drugs or alcohol, ability to take care of themselves (e.g. live independently) and learn from past mistakes.

Positive and possible plans for the future were reported by two thirds of the participants (10) and included pursuing a particular educational course, applying for a specific job and or changes in living arrangements.

The majority of the resilient group reported that others, usually carers or teachers, had positive expectations of what they could achieve in the future.

Current positive expectations were reported by almost two thirds of the participants (9). Four people in the resilient group did not have a view of what others expectations of them might be and one reported them to be negative expectations.

The difference between the resilient and less resilient groups in this area is to be expected as some of the factors were used as criteria for judging resilience.

Time Chart Data

Age Factors

Figure 4.11: Age in years at time of being taken into care

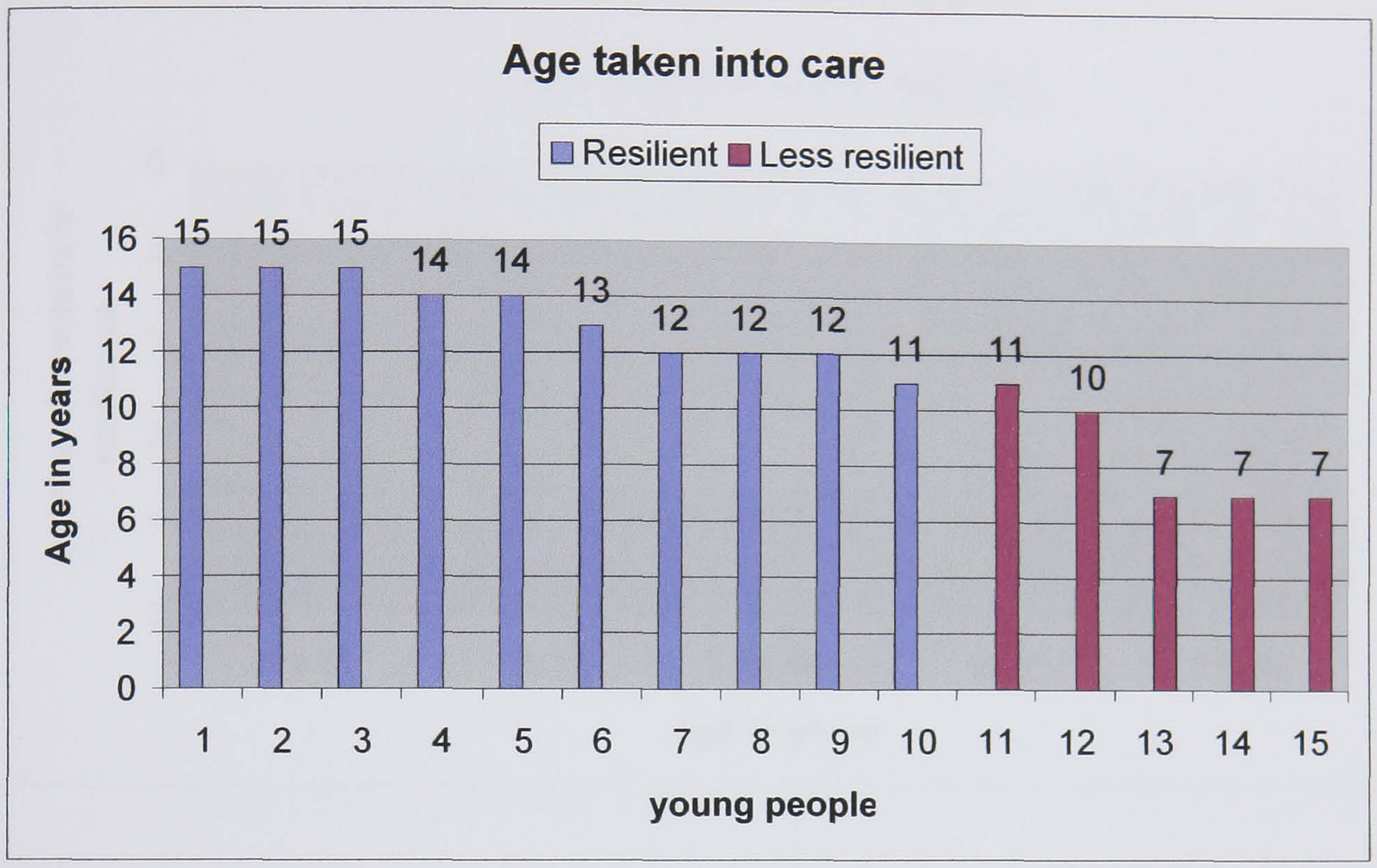
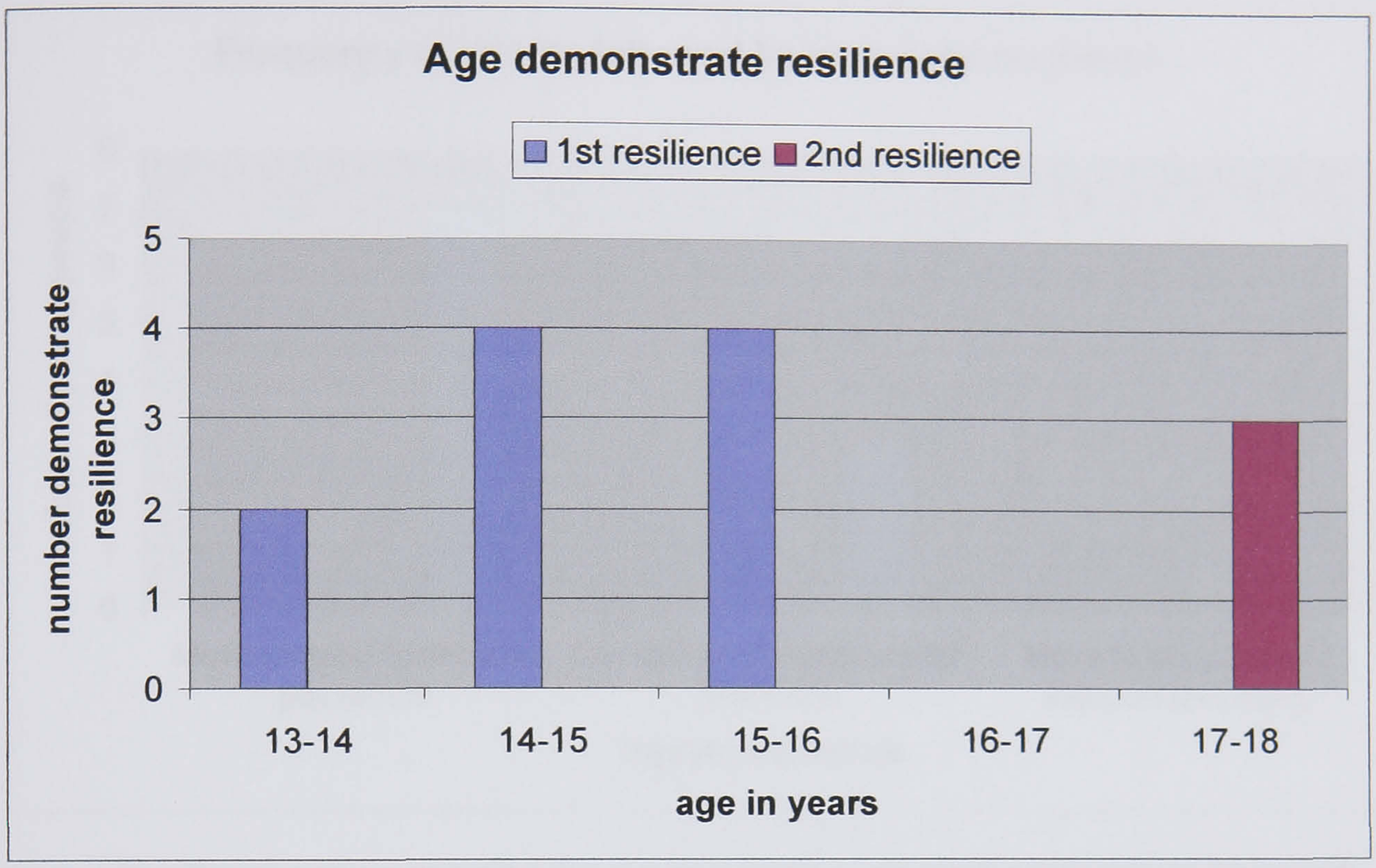


Table 4.17: Result of KS test on age in years at time of being taken into LAC

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Age taken into care	0.74	0.89	0.9	**Yes**

Age in years at the time of being taken into care ranged from 7 to 15. There was a significant difference between the resilient and less resilient group on this variable. The less resilient young people were taken into care at an earlier age (7-11 years).

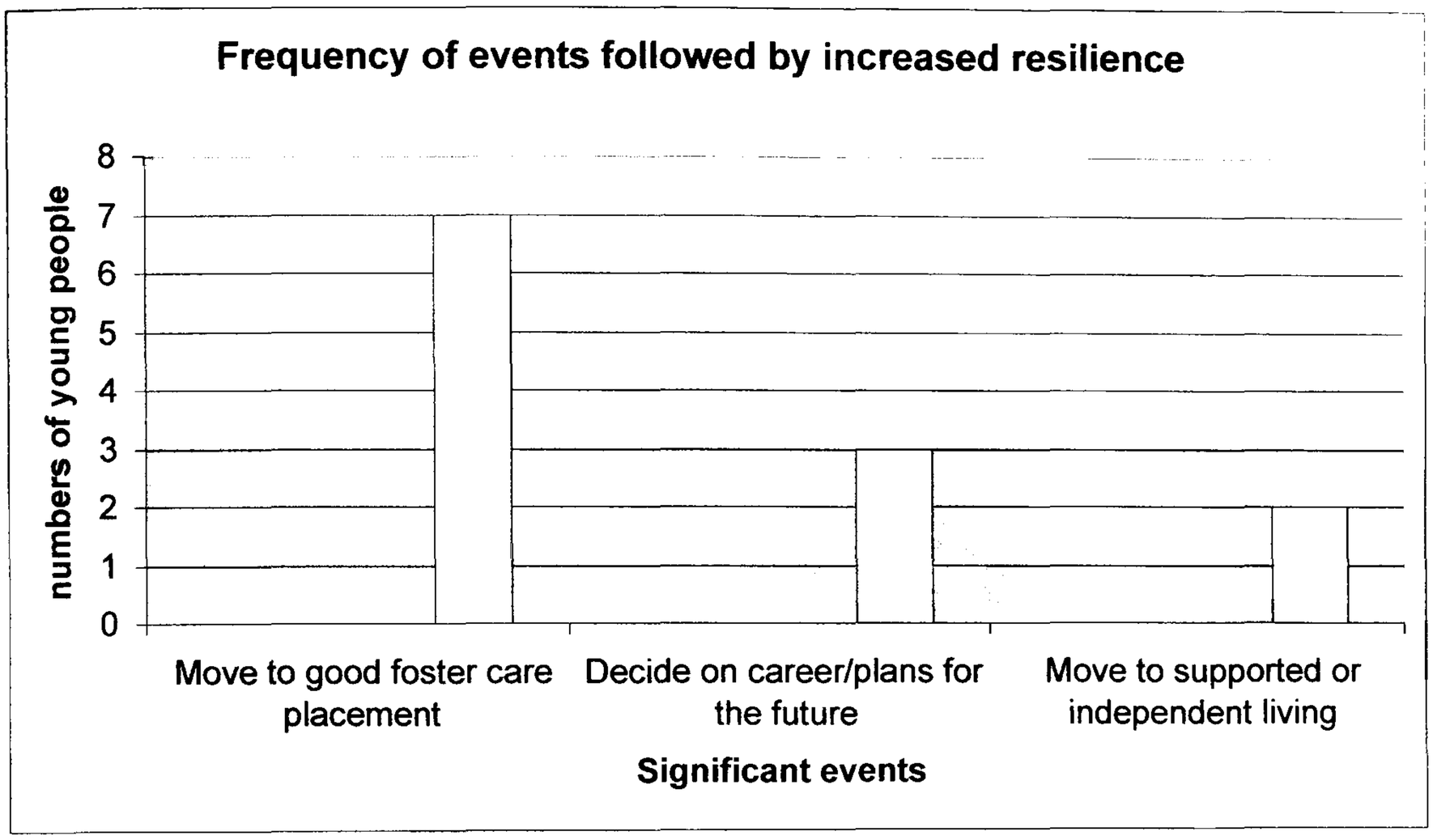
Figure 4.12: Age in years when young people demonstrated resilience*



Resilience was not demonstrated before 13 years of age or in the year after leaving school. Resilience occurred most frequently from the age of 13 years. This chart was complied from the sample of resilient participants three of whom demonstrated resilience twice, once aged 15-16 then again aged 17-18.

Significant Events Factors

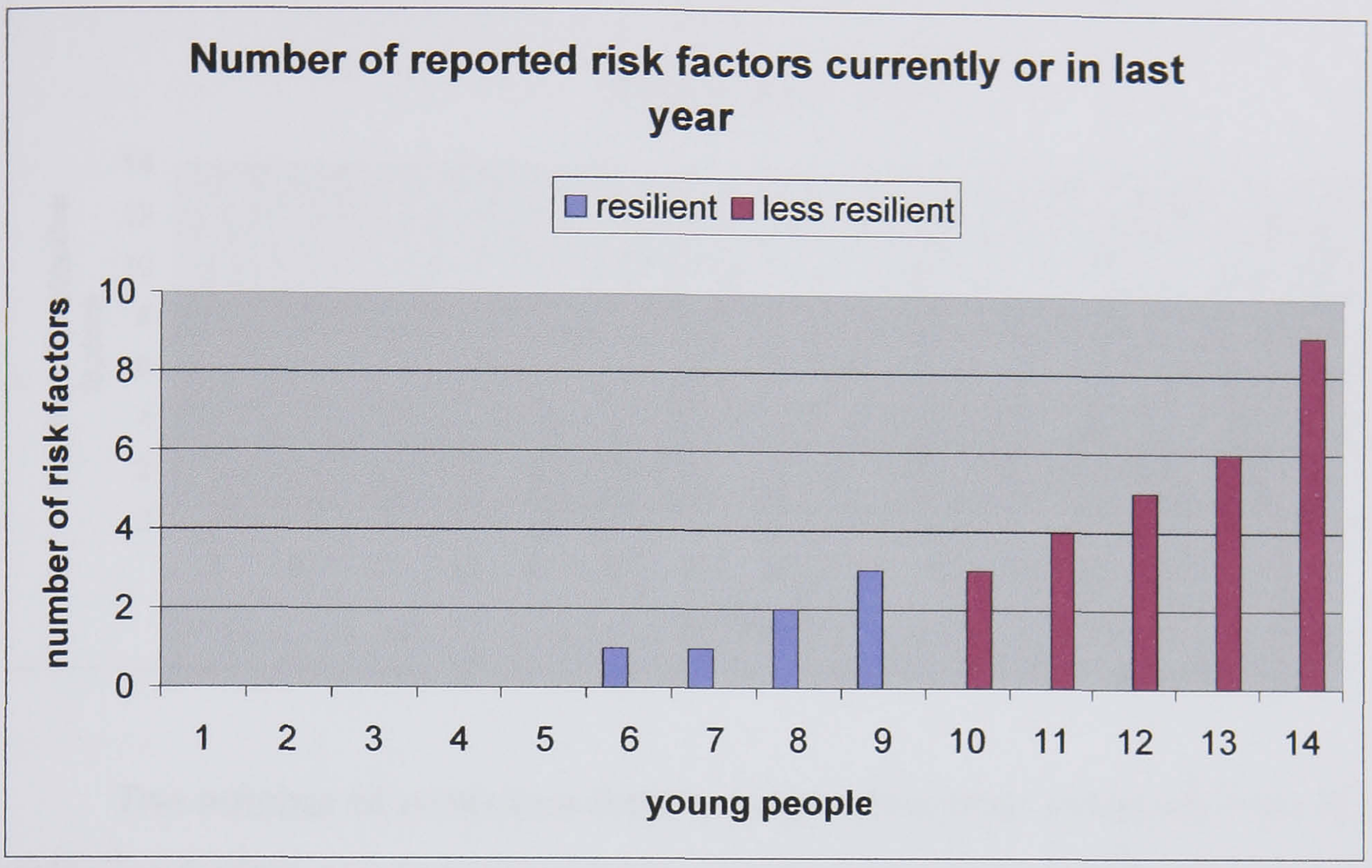
Figure 4.13: Frequency of events that were followed by increased resilience



In seven cases moving to a good foster placement led to increased resilience. In six of these cases attendance at school increased from a rating of one to five. In the seventh case good attendance in school was maintained. One young person reported moving into a good foster placement but evidence of resilience did not follow until two years later when the young person made a decision about his future career plan. Three young people reported having clear plans for their future as the event that began the changes in their lives and for two of the older participants having their own place to live was seen as a key factor in changing their lives. One single event could be identified as initiating a move towards increased resilience in twelve of the thirteen cases of resilience. In the thirteenth case it was difficult to identify one single event.

Frequency of Risk and Protective Factors

Figure 4.14: Number of Reported Risk factors currently or in last year

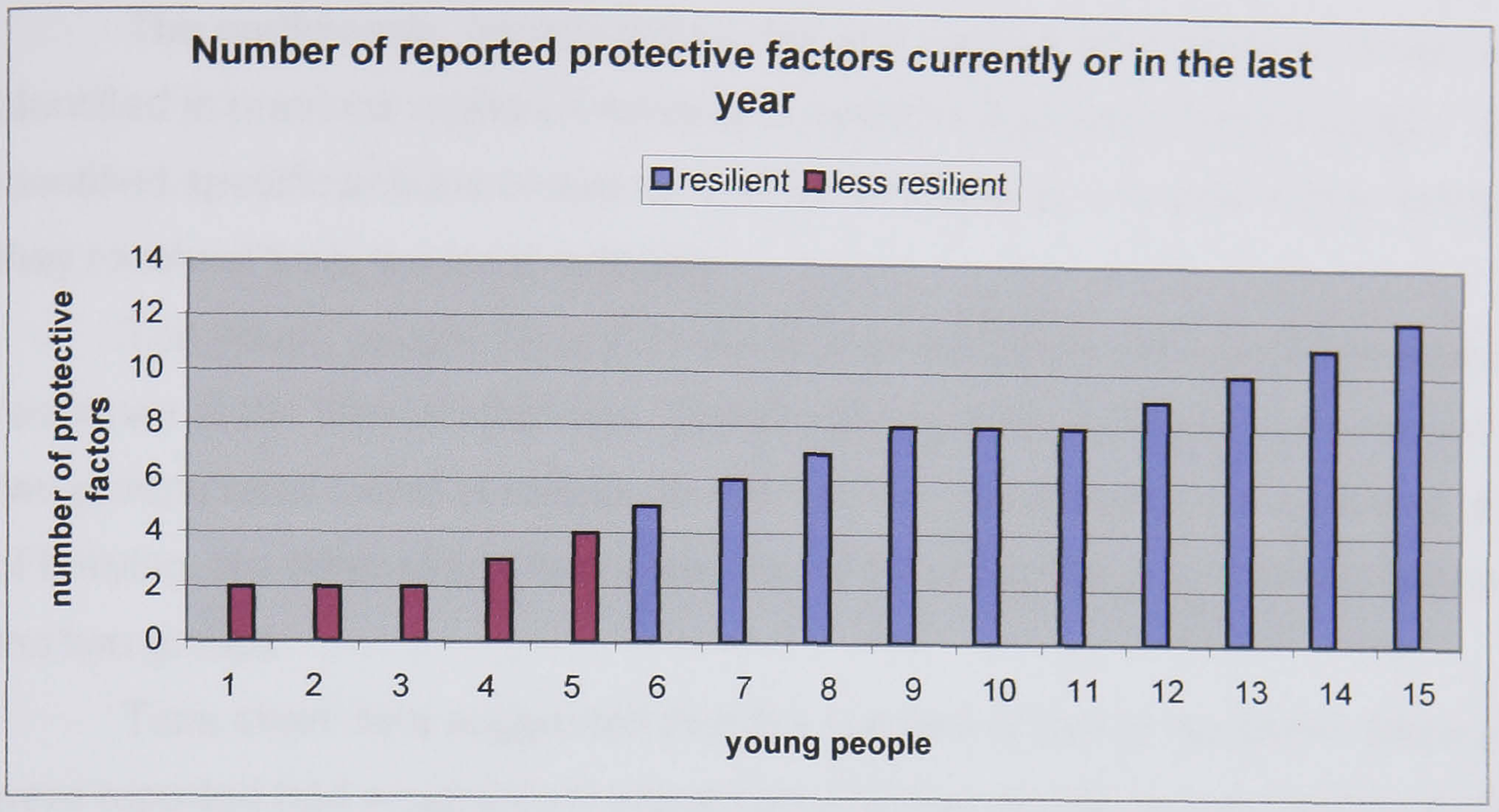


The number of current risk factors ranged from one to nine. No risk factors were reported by one third of the participants (5) who were all in the resilient group.

Table 4.18: Result of KS test on number of reported risk factors currently or in the last year

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Number of reported risk factors	0.74	0.89	0.9	**Yes**

Figure 4.15: Number of reported protective factors currently or in last year



The number of protective factors ranged from one to twelve. Five or more protective factors were reported by two thirds of the participants (10) who were all in the resilient group.

Table 4.19: Result of KS test on number of reported protective factors currently or in the last year

Factor/variable	P less than 0.05	P less than 0.01	Maximum difference	Significant Difference
Number of reported protective factors	0.74	0.89	1.0	**Yes**

The numbers of risk and protective factors being reported by participants was significantly different between the resilient and less resilient groups. The less resilient group reported less protective factors and more risk.

Summary of results

The participants' demonstrated risk and positive adaptation in many areas identified in previous research relating to systems and environment factors. They identified specific actions or events that were helpful or unhelpful in the services they received from the local authority.

Ten young people clearly demonstrated resilience, five demonstrated less resilience at the time of interview. Statistically significant differences between these two groups were found in relation to the age they were taken into care and ratings of bullying. No other single factor was found to be significantly different between the two groups.

Time chart data suggested that the number of risk or protective factors that were reported had a significant impact on whether resilience was demonstrated by the young person.

An increase in the number of protective factors and decrease in risk appeared to be strongly affected by a significant life event which was most often reported as moving into a good foster care placement.

Increased evidence of resilience occurred more frequently after the age of 13 years. No clear evidence of resilience was found prior to 13 years of age or in the year after leaving school. Three participants demonstrated increased evidence of resilience on two occasions.

DISCUSSION

To what extent do young people with experience of LAC demonstrate risk and positive adaptation in areas highlighted in previous research?

The participants' clearly demonstrated risk and positive adaptation in many areas identified in previous research relating to systems and environment factors. The factors listed in Table 2.3 provided a useful framework for establishing the presence of risk and positive adaptation and helped to facilitate gaining young people's views on what had helped and hindered. There were no real surprises in the results, which appear to confirm previous studies. This framework could be further developed to assess the presence of risk and protective factors for individual young people and inform interventions to increase the protective factors and decrease the risk as suggested by Garmezy (Rolf 1999) and Gilligan (2000). It may also have potential as a tool for evaluating the services provided to young people by identifying which factors are most and least effectively addressed by the systems and interventions being used.

What specific actions or events related to risk and protective factors do young people find helpful/unhelpful particularly in relation to the services they received from the local authority?

The participants were able to identify specific actions or events that were helpful or unhelpful in the services they received from the local authority. Their additional and often much more specific comments on what was helpful/unhelpful could usefully be included in further research in relation to effective interventions. The confirmation of what Smokowski et al (2000) referred to as 'motivational support' as a protective factor was encouraging especially in view of the fact that teachers were so often mentioned (as Gilligan 2000 suggested they would be) as significant adults. Greater attention to what adults actually do that makes young people feel supported is just one area where listening to young people has undoubted value.

Is resilience identifiable and would there be any significant differences between resilient and less resilient young people?

Ten participants clearly demonstrated resilience, five demonstrated less resilience at the time of interview. Statistically significant differences between these two groups were found in relation to the age they had been taken into care and ratings of bullying. No other single factor was found to be significantly different between the two groups. This was a more surprising result, which raises more questions than it does answers. Why were there not more significant differences between the two groups? What do these two differences tell us? Is the age at which a young person is taken into care a significant factor because of the amount of time a young person spends in care or could it be related to level of maturity? Are the high levels of bullying related to pre-care or in-care experiences?

Garmezy (Rolf 1999) may have the solution to these questions when he suggests that the task of the researcher is to look at the differences between adaptive and non-adaptive groups then move back to the world of the child. A purely quantitative approach does not really lend itself to this type of analysis but it is worth looking at one participant's story to see what understandings might be gained.

Aged 7 Julie moved into an abusive foster placement, she moved out of this aged 11 to return home where she reports constant abuse from her brother. In year 9 she was bullied badly at school and stopped attending. At age 16 she became pregnant with twins but miscarried when her brother threw her down the stairs.

This one story suggests that it is not the presence of one single risk factor but the cumulative negative impact of repeated risk that affects the demonstration of resilience. This was identified by Rutter (1990) and is supported by Gilligan (2000) and could account for why so few single factors were found to be significantly different between the two groups.

How is resilience best understood in this context? Is resilience dependent on specific factors and/or the interaction between factors? Is it dependent upon single life events or a process of development over time?

The time chart data suggested that the number of risk or protective factors that were reported had a significant impact on whether resilience was demonstrated by the young person. This result also lends support to Gilligan's argument that it is necessary to reduce the number of problems and increase the number of strengths to make a difference. What is interesting is how this might be accomplished. The time chart data showed that an increase in the number of protective factors and decrease in risk appeared to be strongly affected by a significant life event which was most often reported to be moving into a good foster care placement. This lends support to the theory, again highlighted by Gilligan (2000), that single life events can be turning points in development and that young people need a sense of having a secure base. Future research could usefully explore what other life events may be powerful turning points especially in relation to having clear plans for the future, which three participants reported as making a difference to them. Also, are there particular times in a child's development when an event may have more impact than others?

Increased evidence of resilience occurred more frequently after the age of 13 years. No clear evidence of resilience was found prior to 13 year of age or in the year after leaving school. This could be related to what Luther et al (2000) refer to as resilience being a developmental progression with new vulnerabilities and strengths emerging with changing life circumstances. The fact that three participants demonstrated increased evidence of resilience in Year 11 and then again a year after leaving school lends support to this theory and also highlights that leaving school is a major transition that may lead to a reduction in the number of protective factors to a point where risk becomes more dominant. Support for these finding can also be found in the work by Smokowski et al (2000) who found that resilience as a process entails a consistent struggle over time and that transitional events appeared crucial times when young people were particularly susceptible to changing their behaviour.

Methodological issues

Overall this study has raised more questions than it has answered and highlighted potential tools and areas for further research. Despite attempts to address the methodological and conceptual pitfalls associated with studying resilience the reliability of these findings are open to question on several points.

There are obvious biases in this sample, which was dependent upon professionals working in council services/teams identifying young people. They may have been biased in their choices although assurances were given that every effort would be made to identify young people with a broad range of experiences and views, both positive and negative. However, due to many initial difficulties of young people not being available to be interviewed, professionals may well have decided to choose those they felt would be more reliable to avoid further embarrassment. Additionally only eleven out of the initially identified twenty-five young people actually took part. The sample is therefore unavoidably biased towards the young people who were motivated for whatever reason to share their views. The small size of the sample also compromises the reliability and transferability of the findings.

There were inevitably variations in the data collected due to the fact that three interviewers were involved; whilst this affected consistency it is likely to have reduced bias.

The quality of information gathered could have been significantly enhanced by for example using documented evidence from care plans and personal education plans which should have provided more reliable measures of school placements, care placements, attendance, exclusions and attainments. This would have made the grouping of participants as resilient and less resilient more reliable than only using the highly subjective reports from the young people themselves. The difficulties associated with using rating scale data also need to be acknowledged – there is no way of establishing whether very bad or good for one person is the same for the next. Interviews with carers, social workers and teachers would be another possible improvement.

The use of quantitative data analysis was limiting as already acknowledged and, at times made the analysis feel shallow. A combination of qualitative and quantitative methodologies focusing on the interactive process of resilience is recommended for further research.

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APPENDIX 1: INFORMATION GATHERING FORM

PROFORMA USED TO GATHER BASIC INFORMATION ABOUT YOUNG PEOPLE SELECTED FOR INTERVIEW

Cross Cutting Review of Services to Young People (13-19) Experiencing Difficulty

Information on the young people selected for interview

We would be grateful if, based on whatever information you have available to you, you would complete a separate proforma for each of the young people who will be interviewed as part of the review. All information will be treated as strictly confidential. It will only be used by the consultants to inform the conduct of interviews. Proformas will be returned to the Cross Cutting Review team at the end of the review.

NAME.....**Age**.....**Domicile** (town/village).....

1. **Educational Arrangements** (please circle)

College / Mainstream school / Special / Offsite unit / Other (please specify).....

2. **Current Service involvement** (please give name of each service, the relevant worker, if known, and the type of service provided)

Service	***Name of worker***	***Type of service***

3. **Previous Service involvement** (main personnel involved and dates, if known)

4. **Key facts relevant to the young person's circumstances** (only brief relevant information required, e.g.: excluded from school /LAC /reasons for young person's involvement in particular groups/any circumstances, needs or issues consultants should take into account)

APPPENDIX 2: INTERVIEW INTRODUCTION

PROMPTS FOR START OF INTERVIEWS WITH YOUNG PEOPLE

- County Council wanting to find out how well they are doing to help young people and how they might improve the services they offer
- Seeking views of **young people** about services they have been provided e.g. social services, youth service, care leavers service, youth offending service, substance misuse etc.
- Voluntary
- Confidential
- Hear to listen to young people and what they have to say has helped or not helped them and what they would like to see happening in the future
- Will ask questions about things we know that usually help but it is OK to pass - only say as much as you feel comfortable with – no pressure to divulge anything

APPENDIX 3: INTERVIEW SCHEDULE 1ST, 2ND AND FINAL DRAFTS

1st DRAFT

(Use Time Line as a framework)

Experience of threatening behaviour (bullying, racial abuse, harassment, when, what, YP response, who tried to help, how, what might have made a difference?)

Interest in education (people valuing education, attending meetings, actively supporting attendance, discussing what happened at school, visits etc, who, how) *Try rating for different people, service personnel to get details of most/least positive behaviours/attitudes)*

Disruption/stability of schooling (moves of home/school during critical periods, transport issues, efforts by services to maintain continuity, who, how, what) *Identify most disruptive/stable periods – what was happening, impact on YP etc)*

Facilities (place to do homework, access to books, libraries, study centres, ICT, Internet, leisure, after school activities, social events etc.) *Rate where facilities were best/worst and why*

Friendships/belonging (who is important to the YP, what they enjoy ding together, problems getting together, support from friends, support given by others to develop friendships, join groups) *Rate*

Expectations (what expectations did people/services have of the YP achievements/behaviour/life chances; assumptions made re behaviour and achievement, by whom, impact on YP, what they did to show it) *Use ratings*

Attendance (good times/bad times: reasons; response from others, who tried to intervene and how, reasons for success or failure, what might have made a difference) *Rate attendance*

Information Sharing (awareness of any communication between services, what sort of information people hold, their own involvement in discussions, plans, reviews, feeling about information being shared, their control over confidentiality) *Rate*

Significant adults (people providing helpful advice for keeping on track, staying out of trouble, resolving conflicts, defending, who made a difference to you and how) *Use ratings for different people and services*

Aspirations (hopes for the future, reasons, what need to be done to get there, who could help and how, what would make the difference)

2nd DRAFT

Use Time Line as a framework and explain ratings 1 = very low, 2 = quite low, 3 = average/middle not high or low, 4 = quite high, 5 = very high

Experience of threatening behaviour (bullying, abuse, harassment, when, where, YP response, who tried to help, how, what might have made a difference?) *To what extent were you bullied/abused, how badly 1 2 3 4 5*

Interest in education (people valuing education, attending meetings, actively supporting attendance, discussing what happened at school, visits etc, who, how) *Rate different people, service personnel to get details of most/least positive behaviours/attitudes how interested 1 2 3 4 5*

Disruption/stability of schooling (moves of home/school during critical periods, transport issues, efforts by services to maintain continuity, who, how, what) *Identify most disruptive/stable periods – what was happening, impact on YP etc Rate disruption – how disruptive 1 2 3 4 5*

Facilities (place to do homework, access to books, libraries, study centres, ICT, Internet, leisure, after school activities, social events etc.) *Rate where facilities were best/worst and why – how good 1 2 3 4 5*

Friendships/belonging (who is important to the YP, what they enjoy ding together, problems getting together, support from friends, support given by others to develop friendships, join groups) *Rate to what extent felt like belonged school/home 1 2 3 4 5*

Expectations (what expectations did people/services have of the YP achievements/behaviour/life chances; assumptions made re behaviour and achievement, by whom, impact on YP, what they did to show it) *How rate expectations of significant others 1 2 3 4 5*

Achievements (when at their best, what enabled this to happen, who was doing what, what did it look like) *Rate the best/worst times 1 2 3 4 5*

Attendance (good times/bad times: reasons; response from others, who tried to intervene and how, reasons for success or failure, what might have made a difference) *Rate attendance primary, years 7 8 9 10 11 where applicable*

Information Sharing (awareness of any communication between services, what sort of information people hold, their own involvement in discussions, plans, reviews, feeling about information being shared, their control over confidentiality) *Rate involvement, people working together, being given choices*

Significant adults (people providing helpful advice for keeping on track, staying out of trouble, resolving conflicts, defending, who made a difference to you and how) *Use ratings for different people and services*

Aspirations (hopes for the future, reasons, what need to be done to get there, who could help and how, what would make the difference)

FINAL DRAFT

Use Time Line as a framework as really helpful way of exploring what has helped/hindered, changes, good/bad times and enables young person to engage quickly.

Explain ratings 1 = very low, 2 = quite low, 3 = average/middle not high or low, 4 = quite high, 5 = very high

Experience of threatening behaviour (bullying, abuse, harassment, when, where, YP response, who tried to help, how, what might have made a difference?)

How badly/severe 1 2 3 4 5

Interest in education (people valuing education, attending meetings, actively supporting attendance, discussing what happened at school, visits etc, who, how) *Rate different people, service personnel to get details of most/least positive behaviours/attitude*

How interested 1 2 3 4 5

Disruption/stability of schooling (moves of home/school during critical periods, transport issues, efforts by services to maintain continuity, who, how, what) *Identify most disruptive/stable periods – what was happening, impact on YP etc*

How disrupted 1 2 3 4 5

Facilities (place to do homework, access to books, libraries, study centres, ICT, Internet, leisure, after school activities, social events etc.) *Rate where facilities were best/worst and why*

How good 1 2 3 4 5

Friendships/belonging (who is important to the YP, what they enjoy ding together, problems getting together, support from friends, support given by others to develop friendships, join groups)

How good friends past/present 1 2 3 4 5

Expectations (what expectations did people/services have of the YP achievements/behaviour/life chances; assumptions made re behaviour and achievement, by whom, impact on YP, what they did to show it)

How high expectations of others 1 2 3 4 5

Achievements (when at their best, what enabled this to happen, who was doing what, what did it look like) *Rate the best/worst times 1 2 3 4 5*

Attendance (good times/bad times: reasons; response from others, who tried to intervene and how, reasons for success or failure, what might have made a difference) *Rate how good attendance: primary, years 7 8 9 10 11 where applicable*

Information Sharing (awareness of any communication between services, what sort of information people hold, their own involvement in discussions, plans, reviews, feeling about information being shared, their control over confidentiality)

How much was information shared 1 2 3 4 5

How much involved in decisions 1 2 3 4 5

Significant adults (people providing helpful advice for keeping on track, staying out of trouble, resolving conflicts, defending, who made a difference to you and how)

How important was each person 1 2 3 4 5

Aspirations (hopes for the future, reasons, what need to be done to get there, who could help and how, what would make the difference)

How much able to help self in past 1 2 3 4 5

How much able to help self now 1 2 3 4 5

Recommendations about how things might be improved in the future

Any other issues you want to talk about?

APPENDIX 4: EXAMPLE OF SUMMARY INTERVIEW NOTES

NOTES FROM INTERVIEW RECORD FOR ONE PARTICIPANT

Best Value review of services to young people

Identifying agency: Leaving Care

Young Person: Ellie 18 years

BACKGROUND

Cancer aged 18 months, lots of operations, missed third of primary education. Colostomy bag aged 7 years. Aged 11 years overdose and lived with granddad. Year 7 and 8 operations on legs in wheelchair then on crutches, bullied in school. Year 9 not want to go to school (relationships issues). Year 10 into care, first foster carers not good. Year 11 foster care placement good, almost full time attendance in school (best year to date). Left school support structures not there anymore taking heroin. Supported lodging broke down, homeless; SS refuse to take back into care, women's hostel. Thrown out of hostel (not severe enough). Back to live with granddad, then mum – not go well. Previous foster carers ask social services to get involved, left Mum last June to live with boyfriend (heroin user). Left after 2 months, into hostel (got off heroin on own) then moved into own accommodation. Currently being supported by leaving care and housing.

1. **Threatening Behaviour 4**
    - Fighting aged 13/14 years home and school, "couldn't walk out the door without being punched in the back of the head by my so called friends"
2. **Interest in Education**
    - Mum = 3
    - Second foster carers, year 11 = 5, made me go to school, helped with coursework, read through homework, employed a maths tutor to improve grades in maths (E- in mock achieved 2% of a B)
    - Primary school teacher = 5, maintained interest all the way through
    - Secondary school staff = 5 especially head of year
3. **Disruption 5**
    - Could have done so much better if had regular attendance all the way through

4. **Facilities**
    - Home = 1
    - First carers = 1, nowhere to work except kitchen table with dogs running around, no computer
    - Second carers = 5
5. **Friendship/belonging**
    - Yr 10 = 2 attendance dipped to 25% in year 10 lots of time off through illness previously, not able to build up relationships, people talk down to you when you are in a wheelchair
    - Up to year 11 = 2
    - Year 11 = 4
    - Now = 5 "four friends are like extended family, I'd die for my friends"
6. **Expectations**
    - Educational expectations = 5
    - Personal expectations = 4, people expected me to get into trouble
7. **Attendance**
    - Up to year 11 = 1
    - Year 11 = 5 "loved social part of school, school was my social life, it's where you learn social skills and discipline, it moulds you"
8. **Information sharing**
    - SS = 2 took foster carers to research colostomy bag – got up to date medical treatment/equipment (independent of SS)
    - School = 5, head of year made herself involved, came to statutory reviews or did reports
    - Involved in decisions = 3, would not let them make decisions without me but times when no control e.g. not asked if wanted to go to first carers or if I was happy there. Often not tell me what was going on especially when first put into care, just driven to foster carers with no information – I didn't know what being put into care meant.
9. **Significant adults**

- Second foster carers = 5, support for education and health - school staff very supportive = 5 given responsibility in YR 11 and head of year made sure she knew what was happening, helped to make friends "you are a nice girl, be yourself, people do want to know you"
- Primary teacher now friend = 5 all way through in supporting me
- Granddad = 5
- Housing Young People in Shrewsbury worker = 5 sorts out bills, find somewhere to live, housing benefits "deserves a medal"
- Leaving care worker = 4 concerned for personal well being (previous social worker rate at –1 scale doesn't go down low enough).

10. Achievements and Aspirations

- Year 11 most positive time – form captain, charity rep, school council, talk to YR 9 about importance of working hard in YR 11, pupil of the term etc.
- Got 9 GCSEs – 5Bs, 4Cs despite huge disruption throughout
- Got off heroin on own in hostel – got person sharing room with to bring drinks, water and tea when needed it – "can't describe the physical pain you go through" (no support to do this decided to do on her own)
- In own flat, trusted friends, going to Outward Bound next week through Princes Trust Project
- Writing book about experiences
- Aiming to go to university to study English and History and become a secondary school teacher

11. Ability to help self

- Second foster carer placement = 4
- Leaving school, 16-17 years = 2
- Now = 4

SUMMARY

Positives:

- Year 11 positive change down to foster carers support and stability, made go to school attendance increased from 25% to 97.5% (only days off for

medical), helped with homework, paid home tutor to help with maths as only got E in mock (SS refused to pay) gained a C

- Positive support from school staff who made sure they attended meetings and knew what was going on
- Current leaving care team support from worker, 4 concerned for personal well-being and team manager "firm but authoritative, knows the history of YP, not just a name on a piece of paper"
- Current Housing Young People in Shrewsbury support 5 sorts out bills, find somewhere to live, housing benefits "deserves a medal"

Issues:

- Information sharing and joint working issues:
    - Lack of information on being taken into care times when felt no control e.g. not asked if wanted to go to first carers or if I was happy there. Often not tell me what was going on especially when first put into care, just driven to foster carers with no information – I didn't know what being put into care meant.
    - Foster carers researched colostomy bag – got up to date medical treatment/equipment (independent of SS).
    - School staff took the lead in linking with social services
    - Carers paid for extra tuition for maths, not available through social services/school systems
    - Other agencies not involved in helping with substance misuse (came of heroin on own)
    - No involvement mentioned of home tuition in relation to lots of time off through illness

Recommendations:

- SS systems "it's not the people but the systems"
    - Train and support foster carers so they feel valued
    - Reduce SW case loads
    - Provide money for extra tuition (foster carers should not have to find this themselves)

- More input and support to teachers so they understand the issues
- Money/support for activities such as extra tuition and driving lessons (parents normally support this so what do you do if you haven't got parents support?)
- Reduce gaps in SW support "it suddenly stops, can't rely on them or trust them"

APPENDIX 5: RESILIENCE TABLES

The following tables outline young peoples demonstration of resilience. Table 7.1 details the evidence collated to form the resilient group and Table 7.2 details the evidence collated to form the less resilient group.

Table 7.1: Young people demonstrating clear evidence of resilience

Interview	Average or increased attendance	Average or above attainment	Positive view of self	Overcome Dependency on drugs or alcohol	Positive plans For future
1	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes
4	Yes	Yes	Yes	Yes	Yes
5	No	Yes	Yes	Yes	Yes
7	Yes	Yes	Yes	NA	Yes
8	Yes	Yes	Yes	NA	Yes
9	Yes	Yes	Yes	NA	Yes
11	Yes	Yes	Yes	NA	Yes
14	Yes	No data	Yes	NA	Yes
15	Yes	No data	Yes	NA	Yes

Table 7.2: Young people demonstrating much less clear evidence of Resilience

Interview	Low attendance	Low attainment	Negative view of self	Involvement in criminal activity and/or dependency on drugs or alcohol	Unclear plans for future
2	No	Yes	Yes	No	Yes
6	Yes	Yes	Yes	No	Yes
10	No	Yes	Yes	No	Yes
12	Yes	Yes	No	Yes	Yes
13	Yes	Yes	Yes	No	Yes

APPENDIX 6: DETAILS OF KOLMOGOROV-SMIRNOV TWO-SAMPLE TEST

DATA. The data consist of two independent random samples, one of size *n*, an the other of size m. Let F(*x*) and G(*x*) represent their respective, unknown distribution functions.

ASSUMPTIONS

1. The samples are random samples
2. The two samples are mutually independent
3. The measurement scale is at least ordinal
4. For this test to be exact the random variables are assumed to be continuous

If the random variables are discrete, the test is still valid but becomes conservative.

HYPOTHESES

Two-sided test

H*0:* The two samples come from a common distribution

H*a*: The two samples do not come from a common distribution

TEST STATISTIC

D=(E1(i) – E2(i)) where E1 and E2 are the empirical distribution functions of the two samples

CRITICAL REGION

The null hypothesis is rejected if D is greater than the critical value obtained from the table

Sources: Conover (1980) and Gibbons (1976)

APPENDIX 7: TIME CHART DATA FROM ALL INTERVIEWS

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
1	➢ Cancer 18 months, operation ➢ missed one third of primary education ➢ Primary school teacher (5)	➢ Overdose ➢ live with granddad (5) ➢ operations on legs, wheelchair ➢ poor attendance (1)	➢ operations on legs wheelchair then crutches ➢ poor attendance (1)	➢ Bullied, stopped attending school (1)	➢ Into care, poor foster care place (1) ➢ Social worker (1) ➢ Few friends (2)	➢ Good foster care place (5) ➢ full time attendance (5) ➢ 9 GCSEs B's and Cs ➢ Head of Year (5) ➢ Friends increased (4)	➢ Supports no longer there, homeless then granddad then mums ➢ Taking heroin	➢ Live with boyfriend also taking heroin ➢ into hostel ➢ off heroin by herself ➢ own flat ➢ applying to university ➢ Primary teacher now friend (4) ➢ Granddad (5) ➢ Good friendships (5) ➢ HYPIS (5) ➢ leaving care worker (4)
3	➢ Perfect reports ➢ Good attendance (4)	➢ Did great ➢ Attendance (4)	➢ Made the wrong friends ➢ Bullied at school (3) ➢ Attendance good (4)	➢ Not get on with Mum who burned coursework ➢ With wrong friends ➢ Attendance good (4)	➢ Move to dads ➢ Changed school ➢ Attendance good (4)	➢ Moved to mums –kicked out ➢ Moved back to 1st secondary school ➢ Pregnant ➢ Community home (1) ➢ Attendance good (4) ➢ Teacher (4) supported ➢ 9 GCSEs Cs and Ds	➢ Son adopted ➢ alcohol abuse ➢ Social workers not involve (1)	➢ Supported living ➢ off alcohol ➢ Substance misuse worker (5) ➢ plans to go to college… ➢ supportive partner (4) ➢ Lost touch with friends ➢ Leaving care worker (2) for effort

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
8	No data	No data	No data	➢ Family breakdown ➢ SS not agree to foster placemen ➢ Attendance poor (1)	➢ Ongoing difficulties at home described as 2 years of misery ➢ Attendance poor (1) ➢ Poor predicted grades D, E	➢ Good foster place (5) ➢ Foster sister was and is best friend (5) ➢ Attendance good (5) ➢ Achieved As and Bs in GCSEs ➢ Involved in decisions (5)	➢ Work in hotel for 8 months, in with bad company ➢ Visited family in Ireland	➢ Attend college and decide to apply for police force ➢ Building up CV with help from Connexions (5) ➢ On learning gateway course ➢ LC worker (5) ➢ HYPIS (5) ➢ New friends
2	➢ 7 years into abusive foster placement ➢ Social worker (5) helped get out of abusive placement ➢ Good attendance (5)	➢ Home to mum abused by brother (5) ➢ Low attendance (3)	➢ Lived with Nan ➢ attendance (3) ➢ Family support worker (5), listened	➢ Lived with Nan ➢ Attendance less (2)	➢ Lived with Nan ➢ Bullied in school (5) ➢ Attendance (1) stopped going ➢ Friends not trust (2) ➢ Social worker (1) dictating, controlling, "kept in the dark"	➢ Good foster care placement attended (5) ➢ Good attendance (5) ➢ Low grades in GCSEs	➢ Live with mum and abusive brother (5) ➢ Pregnant with twins, miscarried when brother threw down stairs	➢ Own flat ➢ HYPIS (5) ➢ Leaving care worker (5) ➢ no clear plans ➢ Friends (1), talk behind back ➢ "whole life has been a nightmare"

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
12	➢ Into care aged 10 years ➢ No data on attendance ➢ FROM 10 TO 16 LIVED IN 2-3 CHILDRENS HOMES (2) AND 10-15 FOSTER CARE PLACEMENTS(3)	➢ Placed in special school ➢ Teacher (5) No data on attendance	➢ Placed in special school ➢ Teacher (5) No data on attendance	➢ Excluded from special school – teacher left and I fucked up ➢ Poor attendance	➢ Non attendance ➢ Using drugs and alcohol ➢ Offending ➢	➢ Non attendance ➢ Using drugs and alcohol ➢ Offending ➢ Violence and possession of weapons	➢ Custodial sentences including one month in prison ➢ ASBO ➢ Currently tagged ➢ Living with mother ➢ Steady girlfriend and friend (5) ➢ Stopped excessive drinking ➢ Concerned that record will top him getting a job as a carpenter ➢ Trusts no adults – most let me down even my mum	

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
5	OK	➢ Sexual abuse by step-father ➢ Attendance good (5) ➢ Told best friend (5)	➢ Disclosed to teacher no action taken ➢ Attendance good (5) ➢ Best friend help out, stay over when Mum working nights	➢ Abuse continued ➢ Attendance good (5) ➢ On track for As and Bs in GCSEs	➢ Disclosed to school nurse ➢ Head of Year (4) made me feel safe ➢ Bullied at school (5) ➢ Mother refused to believe, relationship breakdown ➢ lived with best friend and supported by her mum ➢ community home ➢ foster care ➢ No school place, attendance (1) ➢ self harm ➢ drugs ➢ alcohol ➢ running away ➢ no contact with family ➢ too many people	➢ New foster carers ➢ New school, attend ams ➢ step-father suicide on morning of trial ➢ stopped attending (1) knocked out by anti-depressanats ➢ mother now believe ➢ work experience taster days ➢ move back home ➢ designed logo for LAC team ➢ working in county offices ➢ plans in place to move to semi-independent living ➢ involved in decisions (5) ➢ Social worker (5) ➢ Counselor (5) ➢ Connexions (4) ➢ Leaving care (4)	X	X

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
6	➢ Mum ran away then Dad died aged 2 ➢ Live with grandparents too many kids ➢ Foster place age 7, abusive (5) ➢ Community home aged 10 ➢ Good attendance (5) ➢ Permanently excluded Year 6	➢ Community home ➢ Attendance good (5)	➢ Community home ➢ Attendance good (5)	➢ Temporary foster place ➢ Permanently excluded out of school for long time ➢ Poor attendance (2) ➢ Good foster care place (5)	➢ Special school place, excluded once a month ➢ Poor attendance (2) ➢ Good foster care place continued	➢ Thrown out of good foster place for theft ➢ Offending ➢ Lots of foster care places ➢ community home ➢ poor attendance (2) ➢ no qualifications ➢ no clear plans for future ➢ not feel involved in decisions (3) ➢ social workers (1) ➢ Manager of care home (4) ➢ Friends (4)		
4	➢ Mother long term mental health and substance misuse issues ➢ Siblings adopted or living with relatives ➢ Long term social services involve with family ➢ Attendance good (5)	➢ Attendance good (5)	➢ Attendance good (5)	➢ On drugs ➢ stopped attending school (1) "everything was going wrong"	➢ Foster care (5) ➢ off drugs ➢ attending (4) ➢ Taking 6 GCSEs ➢ Youth work grade 1 ➢ Teacher (4) ➢ Youth worker (4) ➢ Connexions (4) ➢ Substance misuse worker (5) ➢ Friends (5) ➢ Involved in decisions (5)	X	X	X

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
7	➢ Good attendance (5)	➢ Good attendance (5)	➢ Good attendance (5) ➢ Family breakdownliv e with aunty ➢ Foster care ➢ Back to aunty ➢ NSPCC involved	➢ Good attendance (5) ➢ Live at home with parents ➢ Family breakdown	➢ Community home bullying (4) ➢ Plans to move back to live with family/relative ➢ Family (5) ➢ Good attendance (5) ➢ Expecting 5 GCSEs ➢ Involved in decisions (5) ➢ Teachers (5) ➢ Care staff and social worker (4) ➢ NSPCC worker (5)	X	X	X
9	➢ Attendance OK (4) ➢ Family difficulties, involve police	➢ Stopped attending (2) ➢ Foster care placement (5) ➢ New school	➢ Involved with the wrong people ➢ Suspended odd days ➢ Attendance (3) ➢ Foster care (5)	➢ Involved with the wrong people ➢ Attendance (3) ➢ Expected Ds or nothing in GCSEs ➢ Foster care (5)	➢ Careers (5) ➢ Captain in Army cadets ➢ Attendance (5) ➢ Teacher (4) ➢ Taking 5 GCSEs ➢ Plans for army foundation college ➢ Social worker (4) ➢ Information share (5) ➢ Foster carers (5)	X	X	X

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
11	➢ Good attendance (5)	➢ Good attendance (5) ➢ Good achievement As and Bs ➢ Bullied by step father (5) "my life of living hell" ➢ Live with best friend 2 weeks ➢ Foster care one week ➢ Community home 1 year ➢ Bullied (5) in community home	➢ Community home (1) ➢ Involved in stealing car ➢ Self harming ➢ Poor attendance (3) ➢ Hung around with the wrong people ➢ Permanently excluded end of year 8 ➢ Teachers (2) blame for things not done ➢ Social worker (3) not reliable	➢ No school place, no education, attendance (1) ➢ Good foster care (5) ➢ New school ➢ Fight led to not returning to new school	➢ Home tuition 5 a.m.s ➢ Teacher (5) ➢ Attendance (5) ➢ Work experience in nursery 2 afternoons a week ➢ Passed first aid course ➢ Plans to take child care course ➢ Connexions (4) arranged first aid course and work experience ➢ Good long term friend (5) ➢ Carers (5) ➢ Family (5)	X	X	X
14	➢ Brother near fatal accident ➢ Granddad died ➢ Not sleep or eat ➢ Parents physically abusive ➢ Taken into care ➢ Attendance (1)	➢ Acting out in school (1) ➢ Excluded from school ➢ Social worker (3) rarely saw them ➢ Several care placements ➢ Attendance (1)	➢ Acting out in school (1) ➢ Several care placements ➢ Poor attendance (1)	➢ Good foster placement (5) ➢ Moved to good school (5) ➢ Looked after team (5) ➢ Attends youth club, careful who trusts ➢ Good attendance (5) ➢ One day a week at FE ➢ Plans to do NNEB course ➢ Strong link with brother (5) who recovered	X	X	X	X

	Primary years	Year 7 (11-12)	Year 8 (12-13)	Year 9 (13-14)	Year 10 (14-15)	Year11 (15-16)	17 years	18 years
15	➢ Into care aged 11 because of dad ➢ Year 6 teacher (5) ➢ Poor attendance during crisis (2)	➢ Very unhappy foster care placement (1) ➢ Poor attendance (2)	➢ Very unhappy foster care placement (1) ➢ Poor attendance (2)	➢ Good SATs results ➢ Plans to do NNEB course ➢ Good foster placement (5) ➢ Good attendance (5) ➢ Teacher (4) ➢ Family (4) ➢ Social worker (4) moved from terrible placement	X	X	X	X
10	➢ Long term family support since age 5 years ➢ On child protection register ➢ Good attendance (5)	➢ Good attendance (5) ➢ Good Foster care (5)	➢ Plan to remain in care to independence ➢ Not confident to be interviewed on her own ➢ Difficulty staying still ➢ Low attainment Level 2 ➢ Bullying (5) in school ➢ Good attendance (5) ➢ Friends who listen (5) ➢ Teachers (5) extra ones to help with work ➢ Social worker (5) talks to me when upset	X	X	X	X	X
13	➢ Into care 7 years and reports "nothing gone well since" ➢ Permanently excluded from primary school OVERALL ➢ 5 /6 schools ➢ 3 community homes (1)	➢ changes in community homes and schools – they move me because my behaviour is bad – I behave bad because of of they treat me	➢ community home (1) ➢ permanently excluded ➢ currently without a school place awaiting home tution ➢ bullied by staff at community home (5) ➢ YOS worker (5) helping speak to community home staff ➢ Two friends in community home	X	X	X	X	X

Effective multi-agency working: a high profile case study that resulted in a positive outcome for a young person in public care

Research Project submitted February 2003

EFFECTIVE MULTI-AGENCY WORKING: A HIGH PROFILE CASE STUDY THAT RESULTED IN A POSITIVE OUTCOME FOR A YOUNG PERSON IN PUBLIC CARE

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ABSTRACT

Background: John was receiving limited education, living in a local residential home and an active case for the child and adolescent mental health services. Recommendations were being made for a residential therapeutic placement. However, a multi-agency approach was implemented which resulted in John going home and accessing full time education in the community. How was this positive outcome achieved?

Aims: To explore the views of people who participated in the multi-agency approach of what factors (actions, events, processes) contributed towards a positive outcome?

Sample: Seven participants from health, education and social services with strategic or operational responsibilities.

Method: Semi-structured interviews were analysed using grounded theory methodology.

Results: A grounded theory was developed around the central concept of conflicts of interest. Factors were identified which triggered conflict (child and adult stress; dilemmas, hard to solve problems and tasks) and constituted barriers to negotiation (values and beliefs re child placement and inclusion, competitive blame culture and lack of understanding). The main process involved in achieving a positive outcome was one of negotiation (joint decision making, support and cooperation). Intervening conditions (positive changes in child and adults, shared responsibility and shared understanding) also contributed to a positive outcome (consistency of adults, full time education and leaving care).

Conclusion: Identification of these factors should lead to a greater understanding of effective multi-agency working and enable recommendations to be made about future research and practice. Recommendations for practice could include guidance on managing conflicts of interest including identifying the triggers to conflict, the barriers to negotiation and effective negotiation skills and processes.

LITERATURE REVIEW

Background and purpose

In January 2000 John was aged 9 and living in a city residential home. He had been permanently excluded from his primary school and staff at the pupil referral unit refused to teach him. A home tutor visited the residential home twice a week. He had a statement of educational need identifying emotional and behavioural difficulties and significant underachievement. He attended one hour weekly sessions at the Child and Adolescent Mental Health Service (CAMHS). Education, health and social services staff were struggling to meet his needs and requests were being made for John to be placed in an out of authority therapeutic community. However, John did not go to a therapeutic community, he returned home and attended full time education in a local school for young people experiencing emotional and behavioural difficulties. The annual review of his statement of educational need in July 2002 was overwhelmingly positive.

Colleagues in education, health and social services all agree that this was a very positive outcome for John. The outcome for the Local Authority was also viewed as positive with reference being made to having developed a model of working that enabled young people to have their needs met locally as opposed to spending up to £5,000 a week for an out of authority placement. There is little evidence of the effectiveness of therapeutic provision (Gibbs and Sinclair 1998, Berridge and Grimshaw 1994, Department of Health 1998) and recent evidence to support the view that young people do better educationally when cared for within their home authority (Department of Health 2001).

The general belief is that this outcome was achieved, at least in part, through intensive multi-agency working involving decision making at strategic and operational levels. A core group of people from each agency met regularly (monthly) to review and plan ways to meet John's needs. These meetings consisted of core group meetings or annual reviews led by education, statutory reviews led by social services and staff support meetings led jointly by education and CAMHS.

The aim of this study was to explore the views of people who participated in the multi-agency approach of what factors (actions, events, processes) contributed towards a positive outcome. Identification of these factors could lead to a greater understanding of effective multi-agency working which could then be applied to future cases.

Multi-agency working

Effective multi-agency working is highlighted as a key to meeting the needs of young people in public care (DoH 1998, DfEE 2000, Ofsted 2001) however there is little research detailing what constitutes effective multi-agency working at a strategic and operational level or the underlying psychological processes that may be operating. Multi-agency working in relation to child protection has received some attention (Hallett and Birchall 1992; Scott, 1997) but tends to focus on what gets in the way of effective working. Roaf and Lloyd (1995) found many factors limiting effective multi-agency work with young people in difficulty including those in public care, stating that "agencies also find it difficult to agree joint procedures for action, especially concerning the education of a young person in public care" (p 3).

In a recent publication Atkinson et al (2002) studied a range of multi-agency activity involving health, education and social services and identified five different models none of which could be applied to this example. However there are several key themes within the literature that are pertinent to this study:

- The existence of a competitive blame culture between agencies that "have worked competitively rather than co-operatively, blaming one another for perceived shortcomings" (McConkey 2001: 3) to the extent that "a whole agency may be made a scapegoat for the failure of an inter-agency project" (Roaf and Lloyd, 1995: 2). In instances where agency culture is challenged there is resistance to multi-agency working (Atkinson et al 2002)
- Lack of knowledge and understanding of other agencies cultures, values and sometimes competing priorities and the need to understand the roles and responsibilities of other agencies (McConkey 2001, Atkinson et al 2002, Easen 1998)

- Gaps between strategic and operational collaboration, communication and ensuring commitment from other agencies (Atkinson et al 2002) "Very few mechanisms exist for exploring the issues arising from individual case work so as to inform strategic planning" (Roaf and Lloyd 1995: 4)
- Reluctance of one agency to taking the lead role and assuming the referring agency would take responsibility (Roaf and Lloyd 1995, Atkinson et al 2002)
- Access to shared resources particularly in terms of the funding and time that is needed to build co-operation between agencies (Roaf and Lloyd 1995, Atkinson et al 2002)
- Communication skills needed including listening, negotiating and compromising (Atkinson et al 2002)
- Creative solutions can result from collaboration. "When agencies agree to collaborate over individuals with complex difficulties they bring their collective experience and determination to bear. The creative solutions which arise generate improvements in practice for everyone." (Roaf and Lloyd, 1995: 5). The strength of multi-agency collaboration is in the diversity of opinions and ideas that are brought to bear on difficult to solve issues (Machell 1999). However, Easen (1998) suggests that conflict between partners weakens implementation and the establishment of shared understanding of aims and objectives.

In terms of adding to our current knowledge Scott (1997) suggests: "research which seeks purposively selected examples of effective collaboration between agencies may provide one way of moving forward" (p 80). This study is based on the perception of colleagues that effective multi-agency collaboration was achieved and therefore has the potential to contribute to our collective understanding especially in relation to the psychological processes that may provide insight into why "multi-agency working is not easy or easily achieved" (Atkinson et al 2002).

METHODOLOGY

Use of grounded theory

There is a long-standing debate within social sciences including psychology about the way in which research could and should be conducted. This relates to what Cohen et al (2000) refer to as two distinct views of social reality and consequently two ways of interpreting the world around us. They would say that the methodology a researcher chooses to use is dependent upon their view of social reality, whereas Robson (1993) argues that this distinction is more in the minds of philosophers than an actual reality for practicing social scientists who are willing and able to "mix and match" methods according to what is needed for a particular study.

The positivist stance has been criticised for its mechanistic approach for not treating people as human beings, failing to take account of our ability to interpret our experiences, of viewing people as objects that are repetitive and predictable (Cohen and Manion 1989)

The anti-positivist stance has been criticised for being confined by the social reality presented by participants and as having "gone too far in abandoning scientific procedures of verification" (Cohen and Manion 1989: 36). Reliability is questioned in terms of the degree of consistency (Silverman 2000: 9).

Increasingly authors are advocating, "the choice between different research methods should depend upon what you are trying to find out" (Silverman 2000: 1). This study is attempting to identify what factors led to a positive outcome in this particular case. There is no specific theory being suggested and therefore no basis for using a positivist approach. Rather the identification of these factors is being gathered from participants' views. The choice of this methodology has been influenced by the researchers increasing interest and affinity towards the post-positivist perspective and the desire to explore the use of a methodology that values the participants' contributions and uses them as a means of generating theory.

Grounded theory as a method of data analysis "places great emphasis upon and attention to participants' own accounts of social and psychological events and

of their associated phenomenal and social worlds" (Pigeon 1996: 76). Therefore it is suggested that the "theory derived from the data is more likely to resemble "reality" than is theory derived by putting together a series of concepts based on experience or solely through speculation (how one thinks things out to work)" (Strauss and Corbin 1998: 12).

Grounded theory is not as far along the social constructionist paradigm as some methodologies e.g. discourse analysis. The researchers own knowledge and experience has a potentially greater bearing on how the data is interpreted. As Pigeon (1996) explains "some aspects of grounded theory appear to rest squarely upon a positivist, empiricist epistemology" (Pigeon 1996: 81) in that developing theory from data implies that there is a set social order or theory to be verified which exist objectively and can be captured by the researcher. Indeed "in order to begin analysis the researcher needs at least some theoretical resources to guide the process of interpretation and representation" (Riessman, 1993 quoted in Pigeon 1996: 82) because "what appears to be the 'discovery' of concepts and theory is in reality the result of a constant interplay between data and the researcher's developing conceptualisations, a 'flip-flop' between ideas and research experience" (Bulmer, 1979 quoted in Pigeon 1996: 82).

Miller (1995) has suggested that educational psychologists could make use of grounded theory particularly "on those occasions where there is a need to pull together into a more coherent form, a set of data that is complex and phenomenological in nature" (Miller 1995: 14). The issues in this study are certainly complex and grounded theory has been chosen because it is "likely to offer insight, enhance understanding and provide a meaningful guide for action" (Strauss and Corbin 1998: 12).

Sample and Data Collection

The number of people attending the multi-agency meetings ranged from four to thirteen. Purposive sampling of the people involved regularly in these meetings was undertaken. Seven interviews were conducted, two people from health, two from education and three from social services. The specific criteria used to select participants from those who regularly attended multi-agency meetings relates to

whether they were central as opposed to subsidiary players i.e. gatekeepers of resources, key decision makers and/or people who maintained a regular relationship with John throughout the time span (approximately two years). For example, the special educational needs officer was a central strategic player who was present at most meetings, acted as chair for the education core group meetings and had access to resources to implement decisions made. One of the home tutors was also a central operational player in that he provided weekly home tuition to John for approximately two years and attended most of the meetings. Other home tutors and learning support assistants did not maintain their involvement with John and did not attend meetings on a regular basis and would therefore not be seen as central players. Discussion with a social services manager helped to prioritise those people to be interviewed (Appendix 1). The final sample consisted of:

- The Special Educational Needs Officer (SENO) from education with the role of gatekeeper of educational resources, decision maker in relation to educational provision and chair of education core group meetings
- The Home Tutor (HT) from education with a key teaching role who maintained a regular relationship with John over time
- The Social Worker (SW) from social services with responsibility for decision making in relation to care, health and education and key co-ordinating role who maintained a regular relationship with John and his family over time
- The Education Liaison Manager (ELM) from the social services residential home with responsibility for co-ordinating educational provision on a day to day basis who maintained a regular relationship with John over time
- The Residential Key Worker (RKW) from the social services residential home with key carer role who maintained a regular relationship with John and his family over time
- The Clinical Nurse Specialist (CNS) from CAMHS day unit with responsibility for decision making in relation provision for mental health needs including access to the day unit, providing mental health support and who maintained a regular relationship with John over time

- The Specialist Clinic Nurse (SCN) from CAMHS with responsibility for one to one therapeutic support who maintained a regular relationship with John and his father over time

The sample consisted of people with influence at a strategic and resource level as well as people at an operational level delivering day-to-day support. Participation in this study was voluntary and all those asked to take part agreed without hesitation. Participants were made aware that confidentiality could not be guaranteed and agreements were made that they would be consulted if/when the findings of this study were shared beyond the university.

Semi-structured interviews were used to gather the data on participants' perceptions of what factors contributed towards a positive outcome (Appendix 2 details the interview schedule used). The participants were told when first contacted (either by phone or in person) that they would be asked to reflect on what they thought were some of the factors that contributed towards a positive outcome in order to allow them time to reflect back on the events of the last two years. Interviews took place at a time and place convenient to the interviewees and took between thirty minutes and one hour.

Data Analysis

Grounded theory was used to analyse the data and generate theories. The interviews were transcribed and labelled with numbers or letters. Open coding using line-by-line analysis was carried out on one transcript (SENO's) and the concepts identified were given a label (level one codes), which were then relabelled following tutorials. Open coding was then carried out on another transcript (CNS). Key concepts from the two interviews were combined where they appeared to fit together to form broader categories (level two codes). The other five transcripts were then selectively coded for the level two codes already identified. The process of axial coding was employed which begins the process of reassembling the data. The psychological literature was consulted and theories identified that related to the central paradigm that was emerging.

Throughout this process dated memos of ideas were kept. These included a chronology of events taken from the educational psychology file and participants memories of key events (Appendix 3).

These stages of analysis were not sequential, results from axial coding led to redefinition of categories and a constant return to the data.

RESULTS

Level one open coding

A total of 63 codes (Appendix 4) were generated from the first interview with the SENO. These were assigned codes and labelled (1-63) after much deliberation about what concept may be underlying the spoken word and how this might link with previous codes. Table 4.1 shows an example of this.

Table 4.1: Extract from level one open coding of SENO transcript

Spoken words: "very, very tense"
Potential meanings: anxious, conflict, stretched, nervous, contained emotion, strained, tight, heavy, hard, under pressure
Code: under pressure/stressed adults
Label: 61

The 63 open codes were grouped and relabelled (a-s) according to common meanings/concepts that were emerging from the initial coding and the researcher's increased sensitivity from conducting and transcribing other interviews. This resulted in 19 codes being taken forward to the next stage of analysis (Appendix 9).

Open coding on the CNS transcript produced an additional 29 labelled codes (1a – 29a) (Appendix 5) these were then combined with the concepts emerging from the previous transcript to produce level two codes/categories.

Level two codes/categories

Twenty-four labelled categories (A-X) emerged from the two open coded transcripts. Each category can be traced back to the original open codes via the numbers and letters used to label them and the specific quotes from the data. An example of this is provided in Table 4.2.

Table 4.2: Data trail of labels (letters and numbers) allocated to open codes that made up the category of blame culture

Category of Blame Culture
N. Blame culture (34, 37 j, q, 12a, 23a, 29a)
SENO interview original open codes
34. Long held belief "this culture"
SENO revised labels for open codes
j. Disagreement between agencies
8. Disagreement "we didn't educationally feel as though that should be the way forward for him"
19. Predetermined aim "I think the social worker came with the intention of a residential therapeutic community placement"
q. Relinquish/not meet responsibility
37. Relinquish responsibility "education have let this child down"
39. Wasted energy "having to go and do all this stuff and run around and it isn't working"
CNS interview open codes
12a. Conflict within service "again we got into this networks blaming each other or accusing other bits of the network of failing"
23a. Blame culture "you feel responsible for the behaviour, you feel blamed for the behaviour because you've not been able to alter it or change it"
29a. Child to blame "adult mental health workers were wanting to know what we were doing about this awful child"

The 24 categories were used to selectively recode the first two transcripts and the further five transcripts. A total of seven transcripts were therefore coded for these categories.

A memo was created for each category and quotes from the transcripts that referred to the category were recorded under the category heading. An example of this is provided in Table 4.3. Some of these categories were renamed and relabelled as their properties and dimensions became clearer from grouping participants' quotes. Each category then began to be defined. For example mediate became negotiation, which could be defined as arriving at decisions through discussion within agencies and between agencies. In this way the process of axial coding was begun.

Table 4.3: Extract from memo on category of resistance labelled O

O = Resistance

SENO

7 when we first started the meetings it was almost as though we had lined up on one side social services colleagues who were almost indignant at the fact that they were having to do this.

8 the huge, huge amount of resistance that there was from colleagues, mainly from social services colleagues,

18 the majority of people had been kind of always sceptical and a bit cynical and this won't work

18 whereas we'd had to drag out positives in the past.

12 there had been some negativity from some people at the meeting (I think the EBD day school staff were a little bit sceptical about what we've taken on here)

23 the meetings used to be very, very tense

CNS

12 SCW came to see me about John coming back onto the unit.
Now the team members at the time who were there previously
when John was there were not impressed with my decision to
say yes to John, they really were not.

13 They did not want him back.

ELM

3 staff were refusing to accept that sort of behaviour any more … saying it wasn't the right place for him

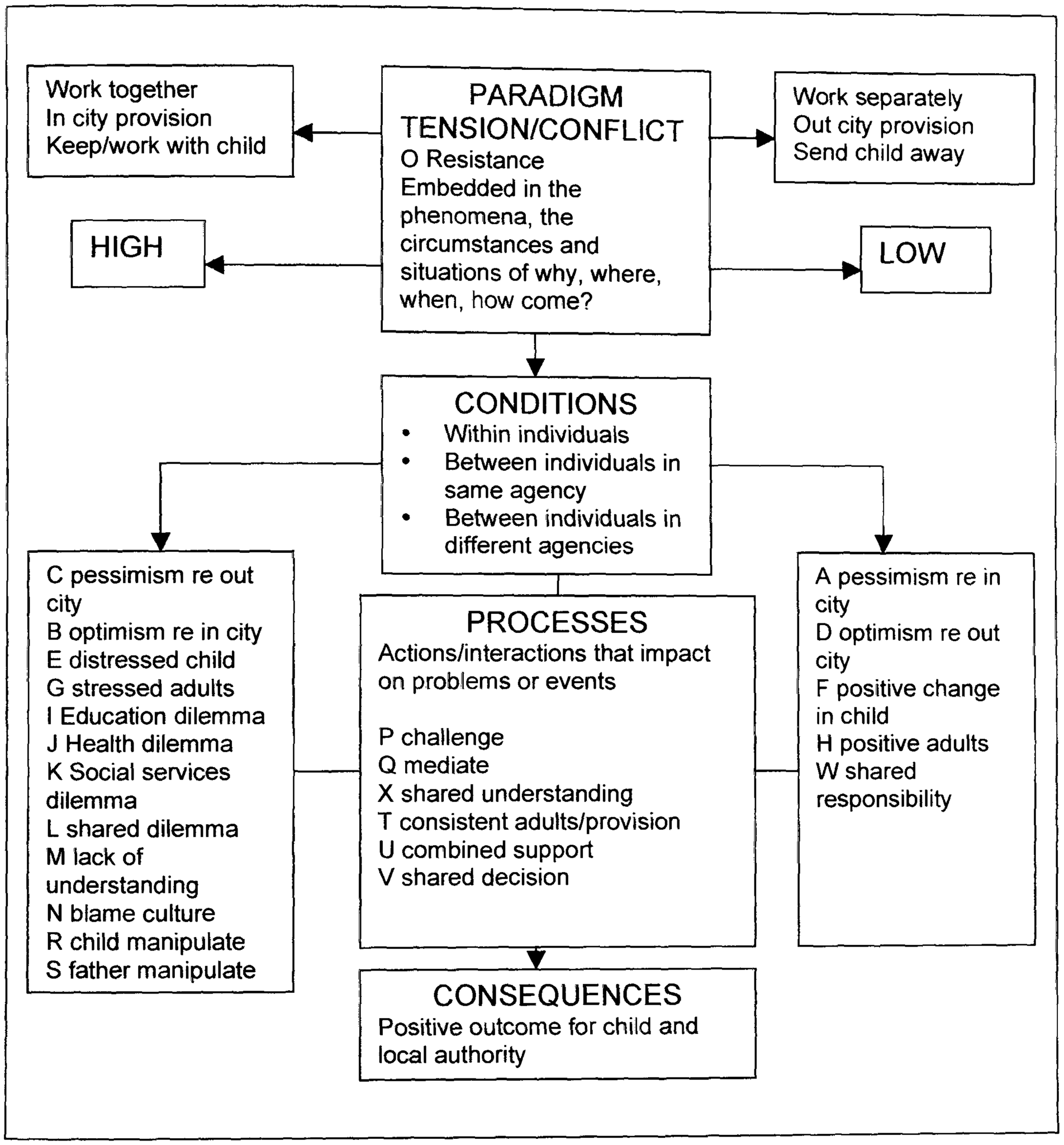
11 there was a lot of talk of well we're not expecting this and we
shouldn't have to manage this situation

35 I suppose sometimes I used to think it was everyone was against
each other

Axial coding

A potential paradigm emerged related to the key category of resistance, which was tentatively redefined as tension/conflict. The dimensions of the tension/conflict were around the issues of working together or separately and making provision in the city or securing an out of city placement for John. The conditions under which the tension/conflict occurs were defined by the categories that had emerged from the data. For example, high tension/conflict appeared to be associated with the category blame culture and lower tension/conflict appeared to be associated with the category shared responsibility. Figure 4.1 shows an outline of how the level two categories were beginning to fit together to explain the paradigm of tension/conflict.

Figure 4.1: Overview of the developing theory using the central paradigm of tension/conflict to connect level two categories

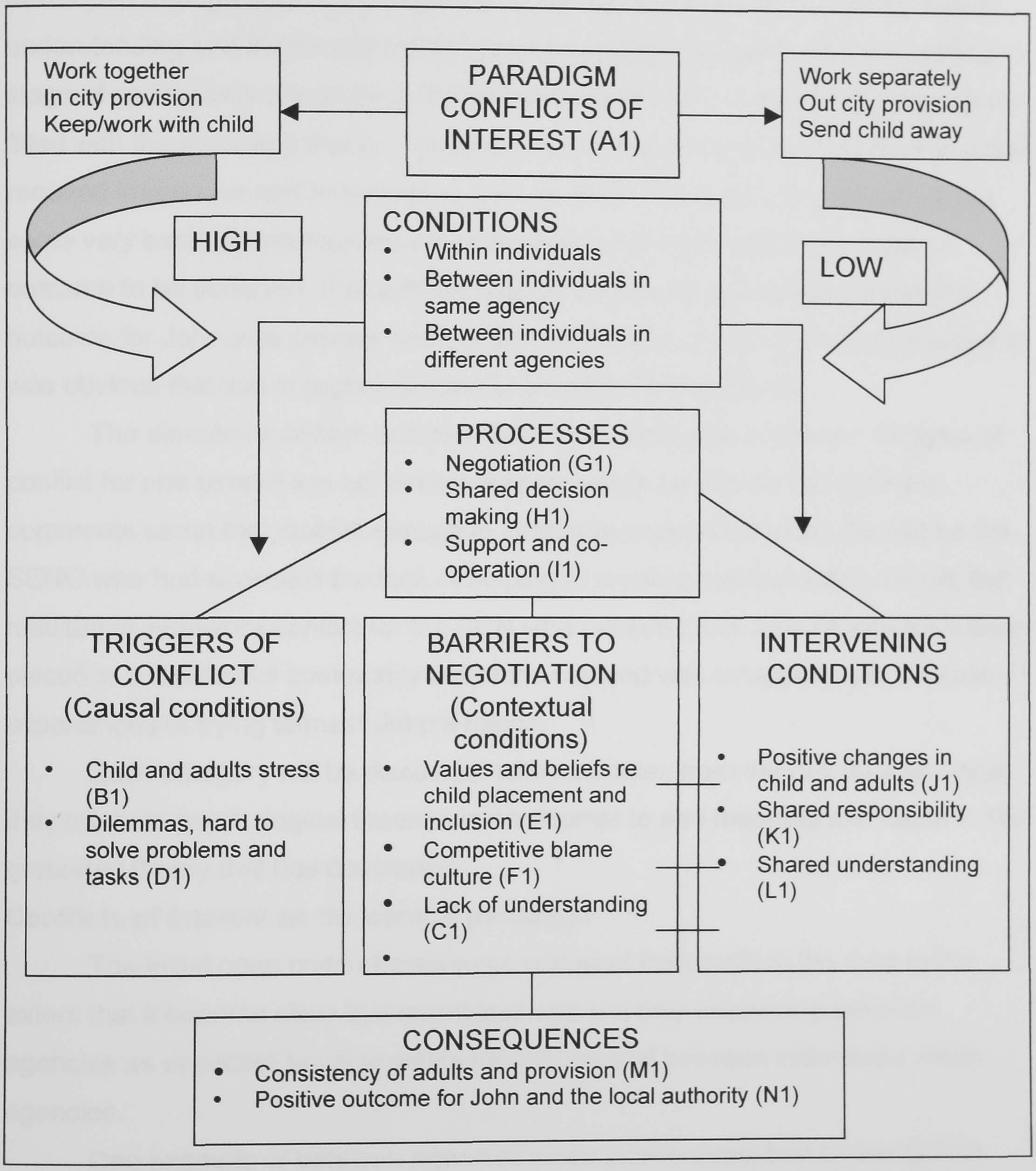


The psychology literature was reviewed in the general area of social psychology and more specifically group dynamics and decision-making. Theories relating to conflicts of interest provided a rich source of information (Tjosvold 1991b, Deutsch 1973, Johnson and Johnson 1995a, 2000, Walton 1987). Theories relating to social identity theory (Tajfel and Turner 1986, Perdue et al 1990); trust (Deutsch 1962, 1973, Johnson 1974); controversy (Johnson and Johnson 1987);

goal conflict (Lewin 1944); competition and co-operation (Deutsch 1962, Johnson and Johnson 2000) were also informative.

This review of the literature led to the development of level three categories (Appendix 7), which involved some redefining of the level two categories and the addition of theoretical descriptors for some of these categories. For example the paradigm of tension/conflict was redefined as conflicts of interest. The category child and adult stress (combination of child distress and adult stress) and dilemmas, hard to solve problems and tasks (combination of all the dilemma categories) were grouped under the heading triggers of conflict. The category of values and beliefs re child placement and inclusion (redefinition and grouping of optimism/pessimism re out/in city placement) and competitive blame culture (redefinition of blame culture) were grouped together under the heading barriers to negotiation. Figure 4.2 shows the outline of the theory incorporating the level three categories.

Figure 4.2: Overview of the grounded theory using the central paradigm of conflicts of interest to connect level three categories



GROUNDED THEORY

The overall theory developed in this study is outlined in Figure 4.2 and was developed through constant comparison between the data; the researchers own understanding and involvement with the case and psychological theories. At every stage of coding and categorising the interview data was consulted to review how it fitted with the emerging theory. This was not a linear process but a cyclical one that required immersion and saturation in the raw data. This theory is suggesting that some very basic psychological processes were at work in enabling a positive outcome to be achieved. It should be noted that all participants agreed that the outcome for John was positive but it wasn't until the very end of this process that it was obvious that this category needed to be added to the theory.

The dimension of high and low conflicts of interest is not linear. Triggers of conflict for one person are not necessarily the same for others. For example, comments about the positive change in John may result in reduced conflict for the SENO who had accepted the task of helping to create provision within the city but resulted in increased conflict for the SCN who believed that John should have been placed in a residential community out of the city and was struggling with his own experiences of trying to meet John's needs.

Each category will be discussed with examples from the raw data and how they relate to psychological theories in an attempt to add meaning and depth to the grounded theory that has developed.

Conflicts of interest as the central paradigm

The initial open code of resistance occurred frequently in the data to the extent that it became clear that resistance was not only happening between agencies as expected but also within individuals and between individuals within agencies.

One example of between agencies resistance is described by the SENO: "When we first started the meetings it was almost as though we had lined up on one side social services colleagues who were almost indignant of the fact that they were having to do this … there was a huge, huge amount of resistance" (SENO paragraph 8).

Resistance occurred within each agency. In health: "SCW came to see me about John coming back onto the unit. Now the team members at the time who were there previously when John was there were not impressed with my decision to say "yes" to John, they really were not" (CNS paragraph 12). In education: "there was a lot of talk (from the new home tutor and teaching assistant) of well we're not expecting this and we shouldn't have to manage this situation" (ELM paragraph 11). In social services: "at one time staff (in the community home) were actually going to put a petition to actually get John moved" (RKW paragraph 16).

The level of resistance and conflict within individuals is described by the RKW: "I even questioned myself whether I could work with him professionally when I first started" (RKW paragraph 4).

With this level of resistance and conflict it appears surprising that any positive outcome was achieved. The literature on managing conflicts of interests is helpful. Johnson and Johnson (2000) acknowledge that conflicts of interest can be destructive creating anger and hostility. However they also note that conflicts "carry the potential for many important positive outcomes. Conflicts can focus the attention on problems that have to be solved and energise and motivate you to solve them. Conflicts can clarify how you need to change ... conflicts can clarify what you care about and are committed to (Johnson and Johnson 2000: 380). Essentially, the literature supports the view that when conflicts of interest are managed they can help in gaining the commitment of group members to implementing group decisions and it is not the presence of conflicts but the way they are managed that determines whether they are destructive or constructive. The question this theory is attempting to answer is how were these conflicts managed to the extent that a positive outcome was achieved? A potential answer lies in understanding the nature of the conflicts.

Walton (1987) suggests that conflicts can be managed when their occurrence can be understood by studying the conditions that trigger conflict and the barriers to the beginning of negotiations. "To **avoid** the conflict you remove the triggering events and build up the barriers to negotiation. To **resolve** the conflict,

you increase the frequency of the triggering events and decrease the barriers to negotiation" (Johnson and Johnson 2000: 387).

Triggers of conflict

This theory suggests two triggers to conflict between the individuals and agencies involved:

a. Child and adult stress
b. Dilemmas that posed hard to solve problems and tasks to complete

Child and adult stress

There are vivid examples in the data relating to the distressing nature of John's behaviour one of the most striking is provided by the CNS: "he'd hurt himself. He'd bang his head and punch himself and on one occasion he got his hand he held his other hand by the wrist and was thumping himself on the bridge of the nose with his fist using his other hand to make it happen and his nose started bleeding and what he did was swallow the blood and then spat it back out at us which is I think one of the most disturbing things I have ever seen a child do" (CNS paragraph 6).

There are many references in the data to adults being under stress: "You feel a total helplessness and feeling disempowered ... he could disempower quite skilled staff quite easily" (CNS paragraph 21). "People were really getting stressed because he knew how to manipulate and push buttons" (SENO paragraph 24). "The behaviour he displayed scared a lot of adults, it scared me" (RKW paragraph 4).

The high level of distress that was being experienced by John appeared to result in behaviours that caused the adults trying to support him to experience high levels of stress themselves which led to increased conflict and resistance within the different settings. This category has therefore been identified as a significant trigger to conflict. It can also contribute to another factor that has been identified in controlling the occurrence of conflict, which is the entry state of group members (Johnson 2000). People's ability to control their behaviour, their level of self-awareness, ability to communicate with others and withstand stress will have a

bearing on whether the group member is too anxious or defensive to negotiate effectively. This is illustrated in a comment by the SCW that "SENO was being so positive and there was me having these weekly sessions with John where I was battled into submission by him and thinking this isn't reality, it's just an exercise in positive thinking ... it wasn't the emotional level I was operating at" (SCW paragraph 9).

Dilemmas, hard to solve problems and tasks

The amount and frequency of dilemmas encountered by individuals and agencies is evidenced by numerous quotes from the data and the chronology of events taken from the educational psychology file as well as participants' memories of key events (Appendix 3). These included the following:

- Permanent exclusion from primary school aged 8 years
- Not being able to access provision at the Pupil Referral Unit or the local day school for pupils with emotional and behavioural difficulties
- Difficulties in appointing teaching staff: "it was taking such a long time to get a home tutor who would work with him" (SENO paragraph 6)
- Employment conditions of home tutor: "my position as a home tutor was extremely precarious ... if he hadn't been there for more than two sessions I would have started to lose money" (HT paragraph 21)
- Finding a place for the teaching to take place: "one of the big problems was never knowing where the home tuition would take place" (SENO paragraph 30)
- Organising and maintaining transport: "taxis weren't turning up, they were turning up wrong" (ELM paragraph 13)
- Use of medication for symptom relief: "I remember thinking he hasn't got attention deficit disorder ... there's a danger in giving children medication for symptom relief because suddenly it's 'oh well he had attention deficit disorder all along' and he didn't, it was symptomatology of emotional abuse" (CNS paragraph 19)
- Health and safety within the home and community: "staff were saying we don't want to be coming on duty to find that other young people have strangled John or John's killed himself because of his risk taking behaviours, climbing on roofs,

running across roads" (RKW paragraph 16); " he would challenge older children in such a way that he had no sense of the danger that he was in and he put himself in danger on a regular basis ... others were making definite suggestions that they were going to harm him" (SW paragraph 9)

- John's care status and concerns about child protection and family issues: "John wasn't on a care order, this was a voluntary accommodation, the local authority had no legal powers to make decisions, everything had to be done with the agreement of the father who had parental responsibility" (SW paragraph 5)

Child and adult stress together with the ongoing dilemmas appear to have been consistent triggers to conflict. The theory suggests that in order to resolve conflict these triggers are increased rather than decreased. It is difficult to quantify this, however the chronology itself points to the fact that there were ongoing dilemmas and it appears that no sooner had one dilemma been resolved than another appeared. The suggestion is that these triggers were managed in a way that enabled a positive outcome. How they were managed will be discussed in relation to the process of negotiation but first it is necessary to look at the barriers to negotiation that were present.

Barriers to negotiation

This theory is suggesting three barriers to negotiation:

1. The values and beliefs regarding child placement and inclusion
2. The presence of a competitive blame culture
3. A lack of understanding of professionals involved

If conflict is to be resolved then there should be evidence that these barriers were reduced to some extent.

Values and beliefs regarding child placement and inclusion

The differences in participant beliefs about whether John should have his needs met locally in the city or go to a therapeutic residential establishment are striking at times and give an indication of the underlying values about inclusion that underpinned these beliefs.

The SENO from education clearly states her support for a placement within the city "we didn't think that going out of city into a residential school, which would

have had to have been an EBD school at that point - he was so young and so to remove him out of the context of home and city away out of the community and put him in a residential school with a whole load of other behaviourally disturbed young people - we didn't feel was appropriate. We wanted him to go into another mainstream environment" (SENO paragraph 3). Her views about placement changed slightly to the extent that John was placed in a local EBD day school as opposed to mainstream school but her strong underlying values and belief in inclusion in the community are maintained by the outcome achieved: "a positive for me in actual fact was a kind of vindication of all that time I've banged on the drum and said 'we need to use the resources from the non-maintained budget not to send children out to keep them in' and that was a big positive for me actually, seeing all that working because I knew that what we were doing with the resources was absolutely the right thing to do" (SENO paragraph 28).

The HT from education was not explicit in stating his views about placement, however he does comment on what he felt were positive decisions, which included maintaining contact with the father, maintaining relationships with him and other consistent adults and attending the EBD day school. He did not suggest an out of authority placement as being necessary if there was another child with John's difficulties, instead he supported flexibility in order to meet the child's needs locally.

The CNS from health appears sceptical about specialist placements in his comment "it was like this is not the place for John - well where is the place for John? I think we all look for these mythical establishments that will meet all these children's needs and they don't actually exist" (CNS paragraph 22). He appears to agree with inclusion and mainstream education up to a point "there's a time to mainstream and there's a time for a moratorium ... like a break from that". It is unclear whether this view was developed through working on this case, as his colleague, the SCN, did not share this view. The SCN clearly stated that within the health service "we had a view here that what John needed was a therapeutic community, an out of county placement and the psychiatrist had committed himself to that" (SCN paragraph 9). He felt that "there was friction about out of county

placements that money needed to be spent on this kid … I had the feeling … let's have an enormous meeting with lots of professionals and that will stave off any thought of sending him out to an out of county placement … that would be me at my most cynical" (SCN paragraph 20). His view was that the decision not pursue an out of authority placement was one based on budgets and resources rather than values and beliefs about inclusion. However, in acknowledging a positive outcome he comments that he was "willing to eat humble pie … people change … I was willing to look at it that way and remove the cynicism" (SCW paragraph 21). There was a clear change in his view of out of authority placements in relation to this case.

As far as social services colleagues were concerned the ELM appears to have been initially influenced by what her managers were saying "when I very first started I was led very much by what other people were saying and what my managers here were saying … I talked about wanting education specific from care, what they were talking about was wanting everything on site, it was very much about this whole place for John where he would have education on site". Her attitude towards a mainstream placement was sceptical "at one point there was a lot of talk about we need to get him into a mainstream school and I felt that might be a departmental philosophy that might make the figures look better, it might make us all pat ourselves on the back but I don't think it's going to help John … I think realistically it would have been too much" (ELM paragraph 43). Her view of placement appeared to change in favour of local provision as a result of the positive outcome "I wouldn't say necessarily that (another child with these difficulties) needed a whole thing, everything on site anymore, I wouldn't say that we can't work together to provide this service, he wouldn't have to go somewhere else for it to happen" (ELM paragraph 47). She appears to have consolidated her view about placement in favour of an in city response. This was not the view of her colleague, the RKW who provided the daily support to John.

The RKW states clearly that "yeah I do think he should have gone somewhere else even though I think I learnt a lot from working with him … but you had to go through such a lot … should you have to go through that?" (RKW

paragraph 16). Having acknowledged that he had learnt a lot and there had been a positive outcome the RKW supports the view that a future John should have education and health on site in a "smaller unit, no more than a three bedded unit … a kid with the same behaviours as John needs everything on site, the education, the care, the health, with health coming in to support but it's got to be on site" (RKW paragraph 28, 29). His view does not appear to have changed significantly and probably reflects the view of many of the care staff.

The social worker appears to support an in city placement: "there was always a concern that John might need a residential establishment with education on the premises and that would have been the next step if this residential unit hadn't been able to work with John. So that was in the back of everybody's minds that we really wanted to try and keep this child in his home environment as much as possible … in contact with key people … we generally felt that although he was putting himself at risk in the city he was safer here than he would have been elsewhere where he had no support networks at all" (SW paragraph 6). It is unclear whether the social worker changed her view in light of the outcome.

Participants' values and beliefs about placement constituted a barrier to negotiation, some participants changed their view resulting in an overall decrease in this barrier. It is unclear whether their view changed as a result of the processes involved in multi-agency working, positive changes that occurred in the child and adults or the positive outcome.

Positive changes in child and adults

Some of the positive changes that took place included:

a. Changes in John: "the education teacher … actually provided a positive picture for John that had been missing a little bit. He said that he'd known John for years because John had been as a younger child and he was able to report on John in the context of the education setting and again realistic but he did emphasise the positive bits" (SENO paragraph 17). "The level of disturbance that we saw was far less far less than what we'd seen the first time round there had been changes … I think he'd grown up and was using his intelligence maybe a bit more and maybe he had to, to survive the things

he was going through" (CNS paragraph 13). "It was like a gradual thing ... he seemed calmer, he seemed to listen to me more ... gradually he actually conformed" (RKW paragraph 7). "In the end he very rarely got restrained, he was still absconding ... but he learnt the skills of being able to explain himself, verbalise his feelings" (RKW paragraph 19).

b. Changes in the adults: "Now emphasising the positive bits was the breakthrough for the attitudinal change in the social services staff" (SENO paragraph 17). "It was the positive attitude that other people were demonstrating ... it began very, very slowly to infect those who had been resisting ... one by one they turned round and they themselves got a bit more engaged or began to feel that it could work ... the whole attitude of the meetings began to turn round to emphasising positive success" (SENO paragraph 18). "Dad talking about having him back ... that was for me the first time when I could think actually, maybe at some point this might be a possibility" (ELM paragraph 8).

This data suggests that the acknowledgement of positive changes in the young person led to the adults involved being more positive themselves. This may have contributed to a reduction in the barrier of beliefs about child placement.

Competitive blame culture

The culture of agencies blaming each other is a feature noted in previous research on multi-agency working (Atkinson et al 2002, McConkey 2001, Roaf and Lloyd, 1995). It is interesting to note that in this study the blame culture existed not just between agencies but also with agencies and at times individuals felt personally to blame. There are numerous examples in the data to support the suggestion that this was a barrier to negotiation that needed to be decreased: "I think one of the things that had created the resistance in the first place was this culture of education have let this child down and we social services are having to pick up the mess" (SENO paragraph 9).

In relation to interagency blaming the adult mental health service were questioning the input from CAMHS "again we got into this networks blaming each other or accusing other bits of the network of failing" (CNS paragraph 48). Between

agency blaming is clearly evident "the agency that wasn't there (at a meeting) would be the agency that would be blamed so if health weren't there the problem with John would all be solved if health were on board" (ELM paragraph 37). This is backed up by the SCN who comments "whoever happened to not be in a particular meeting at the time … when social services weren't there … we'd all say 'it's terrible the way social services don't do this, how awful, then the next meeting social services would be there but I wouldn't be … then it would be oh CAMHS aren't doing this or aren't doing that" (CNS paragraph 4). "It's quite easy for professionals to have a negative view of other professionals input. There is a sort of culture of oh well that service doesn't do what we ask, what do they spend their time doing? It's universal" (SW paragraph 1).

Health colleagues describe feelings of personal blame: "You feel responsible for the behaviour, you feel blamed for the behaviour because you've not been able to alter it or change it. I think that's a difficult one to work through at times – well have you done this? Yes - why hasn't it worked?" (CNS paragraph 40)

The tendency towards an 'us-versus-them' framework is described in the literature by concepts such as in-group, out-group bias in which people hold less favourable views about groups to which they do not belong, while holding more favourable opinions about groups to which they do belong (Wilder 1986, 1990, Perdue et al 1990). Interestingly when group members self esteem is threatened, they feel a heightened need for in-group favouritism (Crocker and Luhranen 1990). Perhaps at the beginning of trying to work together individuals' self-esteem was threatened and they were more in need of inflating the actions of their own agency and deflating those of others. Over time however, individuals' confidence and self-esteem increased and there was less of a need to blame others as a common in-group identity was built.

Social identity theory, formulated by Henri Tajfel (1982) and John Turner (1987), is helpful in interpreting possible reasons for the change in people's behaviour towards each other. Initially people from different agencies may have been categorising each other, which results in "the depersonalisation of members of out-groups. Individual members of an out-group tend to be treated as

undifferentiated representatives, not as unique individuals" (Johnson and Johnson 2000: 432). A reduction in depersonalisation requires contact among members of different groups, if this contact is structured so the attention of group members is focused on a super-ordinate category identification that encompasses all the people from the different groups (e.g. everyone involved was working with John) then decategorisation and depersonalisation is further decreased (Gaertner et al 1993) and a common in group identity is reinforced.

The social worker's comment relating to the change that took place in the way people worked together provides some support for this theory: "I think as with many of these situations people were not known personally to each other at the beginning because it was representatives of different services, but as people became known to each other, because you were sitting across a table, you could see them, you weren't just talking to them down the phone, you could make judgements about their commitment, their skills, their knowledge from the way they spoke about John ... that built up confidence that people were speaking from a sound knowledge base and when somebody said we think John needs this other people were prepared to agree" (SW paragraph 11).

This theory suggests that these strong tendencies to blame each other and each other's agency was a barrier to negotiations that reduced over time through the personal contact needed for negotiation.

Shared responsibility

The reduction of this blame culture can be evidenced in the examples of shared responsibility in the data: "There was this feeling that we were actually the John group or whatever we were ... we had an identity and we had a sort of shared experience thing that was going on but it was still hard" (SENO paragraph 24). "We really had to pull out all the stops and we had to work together ... at every meeting everybody was invited because it was clear that we had to work together and make relationships that meant that we could trust each other" (SW paragraph 8).

Lack of understanding

Lack of knowledge and understanding of other agencies cultures, values and competing priorities has been identified in previous research (McConkey 2002, Atkinson et al 2002, Easen 1998). This study has also highlighted a lack of understanding, which is viewed as a barrier to negotiation, which reduced over time. There is clear evidence of a lack of understanding at every level (individual, within service and between services). The CNS notes "I think there were a number of people who were involved strategically with John who would sometimes say things that actually, if you worked directly with John were not that helpful. I remember thinking you want to spend some time with this boy 'cause you would not come out with that if you'd spent some time with him" (CNS paragraph 35). This was reinforced by the ELM who notes "some comments were dismissive of what the actual issues were … it was like you've never restrained him, you've never had to have him for an hour and a half when he doesn't want to be there with you" (ELM paragraph 40). At an operational level the HT "didn't know anything about his background or why he wasn't in school or living at home" (HT paragraph 1).

The action of getting together and engaging in negotiation enabled sharing of information, which led to a shared understanding of John and also of other peoples' roles and the systems they worked in.

Shared understanding

There is evidence that a shared understanding was achieved in relation to understanding John: "I remember one meeting really stood out to me and I think it was a meeting where we'd done our assessment of John and I took it to the meeting and I remember reading it out and I think it really felt quite liberating to the other people who were working directly with John because it was yes that's him that's him exactly" (CNS paragraph 15).

There is also evidence of increased understanding between agencies: "I remember RKW first coming to one of the meetings and saying I didn't realise there were so many issues involved, I didn't realise that the reason we couldn't just

say to them we've had such and such and they'd say yes or no was due to so many, many, many different issues" (ELM paragraph 38). "When things were taking longer than people would have liked, for instance in the early days when it was taking a long time to find personnel to provide this individual education package for John it was very helpful for everybody to understand all the reasons for that in terms of really good reasons, administrative reasons, health and safety considerations that it wasn't people just stone walling and not doing anything about it. You had feedback about what people had been doing and the reasons why things hadn't been able to be progressed. People from other disciplines could accept that these were genuine reasons why things weren't progressing but peoples' will to progress things hadn't altered" (SW paragraph 11).

The range of people involved appears to have been important in developing a shared understanding: "it's not joint working if you've only got half the people there ... it's very important that you have not only the people with the power to make the decisions but you have the people who are actually doing the direct work ... otherwise those people high up don't get to hear what the real problems are and those people doing the direct work don't realise the enormity of the situation outside of what they deal with ... it really does open up communication" (ELM paragraph 49). The gap between strategic and operational collaboration was identified by Atkinson et al (2002) as leading to problems in communication and commitment and provides further evidence to support the need for involving all the key adults in this process.

These quotes provide clear evidence that one of the barriers to negotiation, lack of understanding, was considerably reduced.

Processes

The central process identified in this theory is that of negotiation which is defined as "a process by which persons who have shared and opposed interests and want to come to an agreement try to work out a settlement" (Johnson and Johnson 2000 p388).

There is a choice to be made when using negotiations to solve conflicts of interests "you can go for a 'win' by acting like a shark and using force or distributive

procedures, or you can go for solving the problem in a mutually beneficial way by acting like an owl and using integrative or problem-solving procedures. Both are appropriate under certain circumstances" (Johnson and Johnson 2000: 395). Distributive (win-lose) negotiations tend to be used when the relationship between the participants is not important because the damage it can cause to future cooperation among group members significantly reduces the secondary gains, in that trust is often undermined, communication and dialogue inhibited and constructive resolution of the conflict diminished. On the other hand integrative (win-win) negotiations concentrate on solving mutual problems to participants' satisfaction.

The data suggests that integrative negotiation was the dominant method employed to resolve the conflicts of interest in this study: "the more I went I saw it wasn't the educational psychologist and SENO making decisions, it was also negotiations constantly going on between the educational psychologist and SENO as well … you realise … everyone does have different opinions and there is room to negotiate" (ELM paragraph 33). There are some examples of distributive negotiations, which appear to largely be centred on resource issues. In order to demonstrate from the data that this process was taking place examples from the categories of negotiation, shared decision-making and combined support are quoted in relation to the important points associated with all negotiations outlined by Johnson and Johnson (2000).

First, negotiations involve three types of interdependence:

a. Participation interdependence (more than one person or agency in this case)
b. Outcome interdependence (the outcome could only be reached through cooperation between the agencies)
c. Information interdependence (agencies were dependent upon one another for information about the agreements being made).

The reliance on each other for information can result in dilemmas around honesty and trust, participants need to make decisions about how much they are willing to share information and how much they are willing to believe others. It has

been demonstrated that information was being shared and the data provides evidence that participants were honest and trusting of each other: "there needs to be much more of a willingness to listen to each other and I think that we found ways to do it ... we learnt some lessons there in the end because people were able to respect each others point of view" (ELM paragraph 48). "I think people felt confident they could say what they felt and I think it was getting to that point defensive barriers came down" (CNS paragraph 43). "It does help when you get on with people and feel you can trust people and that we're all sort of on the same side" (CNS paragraph 44).

Second, there are competitive and cooperative elements within any negotiations. The desire to make agreements as favourable to one's own agency or situation as possible has to be balanced with the desire to work cooperatively with others. The competitiveness associated with the blame culture identified earlier provides evidence that there was some shift towards cooperation. This is further evidenced by the response to the ELM's request for support: "we had John all the time and if there were problems in school we had John, if there were problems here, we had John and that was the point of view we were coming from. CNS finally moved things along in this meeting by saying 'well what about an activity week, we all need to sort something here, we all need to put something in" (ELM paragraph 7).

Third, the primary gain determined by the nature of the agreement (e.g. activity week) will impact on the secondary gain of future working relationships (e.g. development of trust, honesty, communication). The data suggest that due to relationships having been established the ELM was able to pursue her primary gain of getting respite for staff without fear of damaging relationships: "I remember I wouldn't let this one go, you know sometimes I might argue a point three times and then say 'oh well, they're not listening and leave it ... I kept coming back to it because I think I felt supported within the group" (ELM paragraph 25).

Fourth, achieving the norm of reciprocity (same benefit or hardship is experienced by each agency) and equity (the benefits and costs to each agency are equal). There were times when one agency felt they were carrying a heavier

load than others but there is evidence that other agencies attempted to share that load: "there was a time when John was temporarily excluded from the education base and CNS still said 'he can still come here, he's still with us' … someone saying 'right we'll support you'" (ELM paragraph 23). The norms of reciprocity and equity also appear to have been supported by accountability: "it's key that everybody was there and everybody held accountable for what they have and haven't done and held accountable for the purse strings of what they could and couldn't release … that whole thing was massively important" (ELM paragraph 37).

Fifth, negotiations occur over time and move through stages of initiation, exchanging information and ideas and finally agreeing a course of action. This was clearly an ongoing process: "we tackled a lot of issues in terms of partnership working. We reached a lot of shared understanding about how to manage and put together packages between us – who would do what, who's responsibility would be what, how to support each other during the process" (SENO paragraph 27).

Sixth, goal dilemmas of how to reach an agreement favourable to oneself but not so one-sided that the other agency will disagree tends to result in "reasonable" agreements for all as opposed to "perfect" agreements for only one agency. For example, the dilemma of whether or not to prescribe medication was challenging to health colleagues who had previously disagreed with this: "I'm not very big on methyl phenedates … I think we struggled with coming up with the idea and thinking it through" (CNS paragraph 19).

The identification of negotiation as the central process is supported by Atkinson et al (2002) who identified the key skills needed for multi-agency working as including listening, negotiating and compromising.

The consequences

Consistency of adults

One of the consequences identified in this theory is that of consistency of adults and provision, which appears to have developed from an ongoing commitment from key people in each agency. It could be argued that this was a contributing factor or condition however it is argued that this multi-agency approach

actually increased the potential for consistency and continuity and as such is a consequence of multi-agency working.

One of the difficulties with multi-agency working identified by Atkinson et al (2000) is the gap between strategic and operational collaboration, communication and commitment from other agencies appears to have been overcome. A small but significant example of this is the retention of the home tutor whose employment conditions threatened his continued involvement. Also the provision of support form the RKW to John and his father on his return home was not usual practice but seen as significant: "the support package in place from the children's home was important because what happens so often is you form relationships, really good relationships with children and then you have to finish and off they go and you pass it on to somebody else, but they haven't got the relationship … the RKW from the children's home has a relationship with him, it was right that he did the outreach. If we'd got somebody else in who didn't know him it would not have worked" (CNS paragraph 38).

The importance of continuity is highlighted by all of the participants who identify key individuals and the role they played: "I think the fact that HT stayed made a massive difference and enabled John to cope with changes because HT was still there throughout it all and that was fantastic" (ELM paragraph 15). "CNS was holding onto him … hanging onto John, there was no doubt about that" (SENO paragraph 16). "The RKW was important to him and I think the ELM was key as well … and the assistant unit manager … they were the three, whilst expressing everyone's frustrations at times … they stuck with it and promoted him and kept people on track" (CNS paragraph 30).

Positive outcome

All participants agreed that the outcome for John was positive, which is evidenced in the following quotes: "The outcome for John has been positive because he's remained within his community, he's kept all his links and his friendships, his family links and he's now in a full time educational placement in a local authority school and he's living back at home. I'm not quite sure what more of a positive outcome you could actually ask for" (SENO paragraph 26). "I'm very,

very glad it was a massive success I think to have got John home … without rushing. I think … education for a long time wasn't moving and then it moved fairly quickly … I'm glad that we got him in there … I consider it to be a real success … when I look back I say 'that was good that was, that was well good'" (ELM paragraph 44). "It's an outcome I couldn't possibly have dreamed of when I first became involved with him, beyond my wildest expectations of two years down the line we would see a child who was able to and wanted to be back in the school environment all be it not mainstream school, but in a classroom situation" (SW paragraph 14).

Summary

The conflicts of interest as the central paradigm serves to link concepts together and facilitate understanding of what may be occurring in effective multi-agency working. The triggers to conflict (child and adult stress and dilemmas) had not necessarily been resolved but appeared to have been ongoing throughout and intensified at times. Whereas the barriers to negotiation (beliefs about placement, blame culture and lack of understanding) had changed or been reduced due to intervening factors (positive changes, shared responsibility and understanding). The process of getting people together in order for negotiations to take place (shared decision making, support and cooperation) led to the consequences of increased consistency of adults and provision and an overall positive outcome.

This study lends support to the theory that creative solutions can be achieved when agencies agree to collaborate over complex issues (Roaf and Lloyd 1995).

DISCUSSION

Before considering the potential of this study to inform future research and practice the validity, reliability and credibility of the data, the researchers application of grounded theory and level of rigour in interpreting the data and issues relating to transferability of the findings will be considered.

Data validity, reliability and credibility

There were some advantages to being a participant researcher involved in most of the multi-agency meetings as well as having developed a relationship with John over the two years. These included having a detailed knowledge and understanding of the systems and people involved in the case.

However, such a high level of involvement increases the potential for bias in terms of participants' responses and it needs to be acknowledged that participants may have responded in a biased way due to their relationship with the researcher. Potential bias in terms of sampling may have been reduced by the involvement of a social services manager in agreeing the final sample. Additional interviews with those on the "fringe" could serve to corroborate the main findings and/or explore negative case analysis (the exploration of views that do not appear to fit with the emerging data). For example the home tutor and teaching assistant who terminated their work with John may have had very different views, which could have enhanced the richness of the data collected. Further exploration of rival hypotheses could have been undertaken to improve the validity of the data.

The fact that this was a retrospective study also raises issues about reliability including participants' ability to remember information and interpret events in light of the outcomes as opposed to what was happening at the time. This makes establishing cause and effect problematic as evidenced in beliefs about child placement where it was difficult to ascertain whether some participants' views had changed due to the outcome or the process that increased their awareness and understanding.

Ideally this study should incorporate "respondent validation" i.e. participants should recognise the interpretations made by the researcher because "if participants agree with the researcher's account, then greater confidence can be

attached to it" (Pidgeon et al 1996: 84). It is intended that before any recommendations are made to service providers respondent validation will have taken place.

Another source of potential bias in the interpretation of the data relates to the researcher's preconceived ideas about what the outcome might be. To alleviate some of this potential bias colleagues were consulted at several points throughout the study. For example, fellow doctoral students took part in an open coding exercise to establish whether their allocation of codes would be significantly different to those of the researcher. They were also consulted about potential psychological theories that might help to explain and support the data. Tutorials and discussions with colleagues in the educational psychology service were also utilised.

In order to meet the publishability guideline developed by Elliott et al (1999) of 'owning one's own perspective' which requires authors to "specify their theoretical orientations and personal anticipations, both as known in advance and as they become apparent during the research" (Elliott et al 1999: 221) the researcher compiled a conceptual framework (Robson 1993) to identify preconceptions relating to participants' beliefs, aims and motivations (Appendix 8). It is clear from this conceptual framework that the initial thinking was limited and in some cases mistaken. In terms of theory, an early memo notes the potential of studies on resilience, attachment, change, social exchange theory and attitude change none of which were used in developing the final grounded theory. A concern is that other theories that the novice researcher may be unaware of may have been equally relevant in interpreting the data at the stage of level 3 coding and categorisation. For example fellow students also suggested possible links with personal construct psychology and psychodynamic theories of projection and transference, which were not reviewed. The theory selected may therefore be limited by the researcher's own knowledge, experience and biases.

Application of Grounded Theory

Strauss and Corbin (1998) provide guidelines for judging the quality of studies that use grounded theory in relation to the research process and empirical grounding.

Research Process

In any study using grounded theory the reader should be able to follow the analytic logic used by the researcher to the extent that "readers can follow the logic of the researchers complex coding procedures" (Corbin and Strauss 1998: 269). Consideration has been given to providing details of coding and recoding and labelling to allow readers to make judgements regarding the process followed. The process has been outlined in the results with details of specific codes and changes to codes being made available in the appendices. Ideally, given more time, the coding could have been represented in a more easily accessible format using diagrams to show which level one codes led to level two then level three. The reporting format used requires the reader to cross-reference between numbers and letters of different codes to see how they relate. Ideally the frequency of each code and category would have been noted in order to avoid some of the ambiguous terms used (e.g. some, many, several etc.).

Empirical Grounding

Concepts have been generated and evidence provided regarding how they emerged from the data. Links have been made between the concepts and attempts made to identify the causal, contextual and intervening conditions. The resulting categories are linked to theory. More variation could be built into the theory by discussing contradictory statements such as examples of integrative negotiation and issues of leadership and status.

Broader conditions such as the values and beliefs about child placement and blame culture have been considered. Further contextual information on, for example, how decision are routinely made about out of city placements within this and other local authorities could have been included along with conditions that affect outcomes in residential establishments. These could have been discussed

more fully alongside a more detailed discussion of what is known about outcomes for young people in residential care.

Attention has been given to the processes involved and the findings are potentially significant in terms of indicating further research and recommendations for future practice (e.g. guidance on how to conduct effective negotiations in multi-agency situations). Whether the theory will stand the test of time will be dependent on the outcome of further research.

Transferability and implications for research and practice

Some of the factors that contributed towards a positive outcome have been highlighted in other studies and as such may be transferable. For example, recommendations could include the need to involve strategic and operational staff in meeting regularly to collaborate over planning for individuals with complex difficulties. Further research could involve asking specific questions based on what has been learnt from this study. The research questions for the future could include the following:

- Do other examples of effective multi-agency working identify the same factors and processes? Are the triggers to conflict and barriers to negotiation identified in this study a common theme?
- How essential is the consistency of adults and provision in achieving a positive outcome? Is this factor an outcome or a contributing condition?
- Would the introduction of guidelines on integrative negotiation make a difference to the quality of decision-making and outcomes in other high profile cases?

The fact that these results will be shared with service managers from all agencies will provide an opportunity to explore the potential for further research. There are numerous sources of information about how to improve negotiation for example Johnson and Johnson (2000) provide a step-by-step procedures for integrative negotiations. A possible way forward towards informing practice could involve a more in depth review of the literature in this area and the development of guidelines for colleagues to use in multi-agency negotiations. If colleagues are

prepared to trial such guidelines then this could be a rich source of data for further research in this area.

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APPENDIX 1: DETAILS OF INTERVIEW SAMPLE

The sample was prioritised in consultation with a social services manager

Priority rating for interviewing:

1 = essential = 5 interviews

2 = ideal, only if time permits = 2 interviews

3 = luxury, only if time permits = 1 interview

Education

- SEN Officer with the role of gatekeeper of educational resources, decision maker in relation to educational provision and chair of education core group meetings = 1
- Home tutor with key teaching role who maintained a regular relationship with John over time = 1

Social Services

- Social worker with responsibility for decision making in relation to care, health and education and key co-ordinating role who maintained a regular relationship with John and his family over time = 1
- Key worker in the residential home with key carer role who maintained a regular relationship with John over time = 1
- Education Liaison Manager in the residential home with responsibility co-ordinating educational provision on a day to day basis = 2
- Acting Unit Manager and Case manager in residential home with responsibility for whole unit and John = 3

Health (CAMHS)

- Clinical nurse specialist at CAHMS day unit with responsibility for decision making in relation provision for mental health needs including access to the day unit, providing mental health support and maintained a regular relationship with John over time = 1
- Specialist clinic worker at CAHMS with responsibility for one to one therapeutic support and maintained a regular relationship with John over time = 2

APPENDIX 2: SEMI-STRUCTURED INTERVIEW SCHEDULE

Setting the context

You will remember John and the work we did to meet his needs in the city. I am talking to people who regularly attended the multi-agency meetings (core education meetings, statutory reviews, annual reviews, staff support meetings) to try and identify what factors contributed towards a positive outcome (John returning home and attending school full time).

Confidentiality

This interview will be taped and transcribed and every effort will be made to protect confidentiality, however due to the high profile nature of this case, the small number people being interviewed and the fact that you will be referred to by your job title it will be possible for colleagues within the local authority to predict the authors of specific quotes/information/views expressed. It is anticipated that the results of this study will be reported to service managers within the local authority. You will be consulted about the general themes that emerge from the study and asked to comment on the fairness, accuracy and relevance of accounts, which pertain to you. You will be given copies of any reports produced for discussion at relevant education/social services meetings and you will have the right to request amendments and/or veto any comments relating to your contribution to the study.

Key questions/themes (no specific order)

- What do you remember about John's situation when you first became involved? What did you think then about what John needed to meet his needs?
- What memory do you have regarding the key things that contributed towards the changes that occurred over the time you were involved? For example:
    - Decisions that were made
    - Things you did
    - Things other people did
    - Memorable moments
    - Memorable comments
    - Meetings you attended
- What do you think about the outcome?

- If there was another John what do you think should happen to meet his needs?
- Is there anything else you would like to say or comment on?

APPENDIX 3: CHRONOLOGY OF EVENTS

This chronology of events was compiled from the educational psychology file and participants' reported memories of key events

1998

- CAMHS = concerns re no progress even though accessing Thorneywood
- SS = concerns re child protection issues and serious burn to arm caused by young people in the community
- Education = concerns re fixed period exclusions from primary school despite statement of educational need and additional resources

Family moved to Manchester

1999

Family returned to Nottingham in January

- CAHMS = psychiatrist recommends specialist therapeutic placement
- SS = took John into care in January, concerns re inappropriate placement and moved to another community home in the city
- Education = permanently excluded from primary school in June, 4 hours home tuition, PRU placement causing difficulties and received fixed term exclusion from PRU

2000

Multi-agency core meetings began in May

- CAMHS = seeing CNS at Thorneywood one hour a week, then day placement at day unit from November
- SS = request to specialist panel for residential therapeutic placement out of the city in May, multi-agency approach agreed but social services state education plans not viable in July 2000
- Education = PRU staff refuse to teach John, increase in home tuition appoint a teaching assistant and identify a venue for education to take place away from the community home but changes in teaching assistants, appointment of additional home tutor and long delay in accessing alternative venue – Youth Centre

2001

Multi agency key decisions re medication, activity break, EBD day school place and plans for return home after Christmas. Last core meeting held in December.

- CAMHS = continuing to support at day unit, debate about medication, medication agreed
- SS = increase in challenging behaviour in community home, ongoing questioning about placement, concerns about the number of people involved, concerns about potential harm to self and others, statutory review in July agree limited time period for plans to be implemented before agreement for out of city placement, plans made for increased contact with father, returned home in December with outreach support from the RKW
- Education = increase in challenging behaviour at youth centre, one home tutor and teaching assistant stop working with John, delay in appointing replacement staff, education moved to Thorneywood site as Youth Centre no longer seen as viable, plans in place to visit EBD day school, visits to EBD day school and education session begin to take place on school site

2002

- SS = John living at home support from RKW to home stopped April
- CAMHS = stopped attending Thorneywood April but ongoing monitoring of medication
- Education = Gradual build up of attendance at EBD day school, decrease in home tutor and teaching assistant input, full time in class April, positive annual review July

APPENDIX 3: LEVEL 1 CODES

These codes were derived from the interview with SENO and are presented in chronological order as they emerged

1. Shared dilemma
2. Fathers mental health
3. Whole family distress
4. Resolution of need
5. Fixed and predictable
6. Child adrift
7. Social services dilemma
8. Disagreement
9. Placement
10. Wrong time
11. Age of child
12. Links with family
13. Negative peer influence
14. Positive peer influence
15. Tentative
16. Decisions prior to consultation
17. Blocked
18. Reliable
19. Predetermined aim
20. Shared decision
21. Ideal
22. Combined support
23. Negotiation of resources
24. Restore/return home
25. Joint working/co-ordinate/linked
26. Contained
27. Influential support
28. Innovation
29. Placement away from home
30. Open conflict
31. Uncertainty

32. Isolated
33. Resistance
34. Long held belief
35. Support specialist placement
36. Support community placement
37. Relinquish responsibility
38. Carry responsibility
39. Wasted energy
40. Continuous effort
41. Essential ingredient
42. Connections/join
43. Judgements valued/valued others
44. Actively sensitive to detail
45. Unjoin
46. Clarity
47. Speaking from experience
48. Recognition of child strengths
49. Emergence
50. Attitude change
51. Evidence of progress
52. Tension reduction
53. Belief in positive outcome
54. Search thoroughly
55. Openly questioned
56. Growth
57. Shared achievement
58. Reprimand
59. Surprise
60. Group strength/identity
61. Under pressure – stressed adults
62. Justification
63. Uncertainty

APPENDIX 5: ADDITIONAL LEVEL ONE CODES

These additional codes were derived from the interview with CNS and are presented in chronological order as they emerged

1a. Disturbed child

2a. Health service dilemma

3a. Distressed adults

4a. Distressed/disturbed adults

5a. Father manipulating

6a. Child manipulating

7a. Positive change in child

8a. Child survival strategy

9a. Lack of clarity of meetings

10a. Positive adults

11a. Action demonstrating understanding/recognition

12a. Conflict within service

13a. Positive change in father

14a. Support for father

15a. Getting together

16a. Lack of understanding

17a. Combined information/ weight of evidence

18a. Combined approach/whole systems

19a. Value others contributions

20a. Changed opinion

21a. Consistency of support from key adults/flexibility

22a. Timing – family able to access support

23a. Blame culture

24a. Negative re labelling

25a. Positive re describing symptoms

26a. Settled environment

27a. Reduce defensiveness

28a. Mutual support and trust

29a. Child to blame

APPENDIX 6: LEVEL TWO CODES

These level two categories and labels (A-X) were derived from the open coding of SENO and CNS transcripts. The original labels from the level 1 coding are shown in brackets.

A. Pessimism re in city (h)

B. Optimism re in city (i)

C. Pessimism re out city (f)

D. Optimism re out city (g)

E. Distressed child (1a)

F. Positive change in child (56, 51, 7a, 8a)

G. Stressed adults (31, 34, 61, 63, 3a, 4a)

H. Positive adults (47, 48, 50, 53, 54, 57, 10a)

I. Education dilemma (b, e)

J. Social services dilemma (c)

K. Health dilemma (2a)

L. Shared dilemma (a)

M. Lack of understanding (16a, 9a)

N. Blame culture (34, j, q, 12a, 23a, 29a)

O. Resistance (m)

P. Challenge (n)

Q. Mediate (o)

R. Child manipulate (6a)

S. Father manipulate (5a)

T. Consistency of adults/provision (s, 21a)

U. Combined support (l, r, 14a, 18a, 28a)

V. Shared decision (k)

W. Shared responsibility (p)

X. Shared understanding (43, 46, 11a, 15a, 17a, 19a, 27a)

APPENDIX 7: LEVEL THREE CODES

These level three codes/categories and their labels (A1 – N1) emerged following a review the psychology literature and lead to the final categories that formed the grounded theory. The original labels from the level one and two coding are shown in brackets.

Central category

A1. Conflicts of interest (O, m)

Triggers of conflict (causal conditions that influence conflict)

B1. Child and adult stress (E, 1a, G, 31, 34, 61, 63, 3a, 4a, R, 6a, S, 5a)

C1. Lack of understanding (M,16a, 9a)

D1. Dilemmas, hard to solve problems and tasks (I, b, e, I, c, K, 2a,L, a)

Barriers to negotiation (contextual conditions that influence conflict)

E1. Values and beliefs re child placement and inclusion (A, h, B, i, C, f, D, g)

F1. Competitive blame culture (N, 34, j, q, 12a, 23a, 29a)

Process categories – the actions/interactions that impact on conflict

G1. Negotiation (P, n, Q, o)

H1. Shared decision-making (V, k)

I1. Support and co-operation (U, I, r, 14a, 18a, 28a)

Intervening conditions that influence conflict as a result of the process

J1. Positive changes in child, adults and situation (F, 56, 51, 7a, 8a, H, 47, 48, 50, 53, 54, 57, 10a)

K1. Shared responsibility (W, p)

L1. Shared understanding (X, 43, 46, 11a, 15a, 17a, 19a, 27a)

Consequences

M1. Consistency of adults and provision (T, s, 21a)

N1. Positive outcome for John and the local authority

APPENDIX 8: CONCEPTUAL FRAMEWORK

This conceptual framework was developed before the interviews took place

PARTICIPANT	POSSIBLE BELIEFS	POSSIBLE GOALS/AIMS	POSSIBLE MOTIVATION
SENO	Need to meet John's needs locally	Develop individual packages within the city	• Save money • Create alternative provision • Increase inclusion
HT	John has potential to do well	Build and maintain a relationship with John	• Employment and increased job security
SW	Need therapeutic environment out of the city as there is no provision in the city	Meet care, health and educational needs of John	• Do a good job
ELM	Educational provision not sufficient	Full time education	• Reduce pressure on staff at community home • Increase stability in unit in relation to other residents
RKW	Only some residential staff able to manage John	Meet his care needs	• Do a good job
CNS	Needs individual therapy and colleagues need support	Meet therapeutic needs	• Reduce pressure on staff at the day unit • Maintain relationship with John
SCW	Needs specialist therapeutic environment outside the city	Meet therapeutic needs and support father	• Be effective in addressing mental health issues

Dissemination and Impact Evaluation

Submitted August 2005

DISSEMINATION AND IMPACT EVALUATION

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THE BEGINNING – YEAR 1

In March 2001 I attended an open day for the Doctor of Applied Psychology (Educational) Course at Nottingham University which led to a request being made to service managers in the Local Education Authority (LEA) for permission to enrol on this course of study and for the LEA to provide the funding. I stated that the key focus of the course was in "developing research skills, enabling quality investigations of subjects of importance" (Memo 08.03.01) and listed a range of possible 'subjects of importance' that could be of benefit for the LEA to have studied:

1. Identifying triggers, educational provision and outcomes for young people placed out of the local authority in residential settings
2. Evaluating the effectiveness of alternative provision at Key Stage 4
3. Evaluating the impact of Designated Teachers and Personal Education Plans on the attendance and attainment of Children Looked After
4. Investigating how the literacy skills of Children Looked After could be improved
5. Investigating what constitutes effective multi-agency working in relation to Children Looked After
6. Investigating the effects of using inclusive tools on the outcomes for Children Looked After. For example:
    - Evaluating the impact of providing learning and/or peer mentoring
    - Evaluating the effectiveness of using person centred planning tools in pathway planning
7. Identifying strategies that could be routinely used to gain the views of young people about their needs and the educational services they receive

As a senior educational psychologist with responsibility for children and young people in public care I was interested in any issues related to the impact of being in the care of the local authority. It is interesting to reflect on these initial ideas and consider to what extent they influenced the choice of topics to be studied.

Assignment 1 involved developing an understanding of methodological issues and presenting three hypothetical proposals for research to include a survey,

experimental and qualitative approach. Understanding methodological issues was a challenge in itself. I distinctly remember feeling completely out of my depth and trying to ground what was being presented (a lot of long unintelligible words such as epistemology, nomilalist, ontological, determinism, idiographic, interactionist, normative, illuminative, ethnographic, phenomenology etc.) by relating them to Star Trek. For example when someone talked about positivist scientific analytic approaches to research I would say: "you mean like Data the android in Star Trek?" Alternatively when someone talked about discourse and social constructionism I would say: "you mean like Diana Troy the counsellor in Star Trek?" However lots of reading and discussion with fellow students helped to develop my understanding and led to the production of an overview of the main approaches to research which I often refer back to (Appendix 1: Overview of Approaches to Research).

It was at this early stage of the course that I began to realise that one of my strengths was being able to take in complex concepts and ideas and rephrase and/or reframe them into bite sized concepts and more digestible vocabulary. Perhaps my being open about admitting my ignorance and constantly asking for help and support in making sense of the academic discourse which was so completely new to me supported other students understanding as well as my own.

The three research proposals were as follows:

- A small scale survey of Personal Education Plans for young people in public care
- An experimental study of the effects of peer mentoring on attendance of children in public care
- A qualitative multiple case study exploring the relationship between mentor and mentee

These proposals were directly related to my initial ideas and my role within the LEA. The survey of Personal Education Plans was not hypothetical, the study was implemented and the results influenced the implementation of Personal Education Plans within the Local Authority. The emphasis on mentoring was due to the fact that I had appointed a young person with experience of residential care as

a peer/achievement mentor to support pupils in residential care to access education. At this time I was very focused on finding a means of validating this appointment to counteract the huge resistance from other agencies. However I came to realise that I did not have access to enough data to support or refute this intervention (one care leaver working with 3-4 pupils).

Assignment 2 involved a critique of selected studies (survey, experimental and qualitative) in an area of interest. The studies chosen reflected my specific interests:

- Study 1 and 2 – Survey and retrospective quasi-experiment by Jackson, S. and Martin, P. Y. (1998) Surviving the care system: education and resilience. Journal of Adolescence: 21, 5, 569-583
- Study 3 – Qualitative study by Bezrucko, N., Reynolds, A. J. and Somkowski, P. R. (1999) Resilience and Protective Factors in Adolescence: An Autobiographical Perspective from Disadvantaged Youth. Journal of School Psychology: 37, 4, 425-448

An analysis of these published studies developed my appreciation of the essential elements of quality and rigor in conducting research. It also increased my awareness of how influential/powerful research can be. With this in mind I became more focused on what was of real interest to the LEA and myself.

Assignment 3 involved drawing up two research proposals (one qualitative and one quantitative), which might be implemented in Year 2 of the course. The studies chosen again reflect my interests and work at the time:

- Qualitative Study: An alternative to out of authority therapeutic placement for a young person in public care: a multi-agency case study.
- Quantitative Study: Resilience and educational achievement of young people in public care

The reading involved in preparing Assignments 1 and 2 informed the research proposals for Assignment 3. Both of these proposals were implemented with inevitable changes to the methodology.

THE MIDDLE - YEAR 2

Assignment 4 was the first rigorous study to be implemented. The refined title was:

"Effective multi-agency working: a high profile case study that resulted in a positive outcome for a young person in public care."

This was a qualitative study, which aimed to explore the views of people who participated in a multi-agency approach to meeting the needs of a high profile young person. Semi-structured interviews were held with seven participants from health, education and social services and analysed using grounded theory methodology.

A grounded theory was developed around the central concept of conflicts of interest. Factors were identified which triggered conflict and constituted barriers to negotiation. The main process involved in achieving a positive outcome was one of negotiation. It was hoped that identification of these factors would lead to a greater understanding of multi-agency working and enable recommendations to be made for practice which could include guidance on managing conflicts of interest through effective negotiation skills and processes.

There was a great deal of interest in this study from people within the Local Authority and the results were presented to a wide range of groups:

- Specialist Resource Panel Meeting (service managers from education, social services) April 2004
- Reviewing Officers Team Meeting (social services children and families manager and all reviewing officers) May 2004
- East Midlands Annual Study Day (70-80 educational psychologists) 24th June 2004
- Doctorate conference presentation (20 educational psychologists on doctorate training courses) 4th July 2004
- Behaviour Support Service, Inclusive Education Support Service and Educational Psychology Service joint training day (between 80 –90 teaching and support staff) 7th September 2004

The presentation to the joint services training day in September involved trialling a process for negotiation (Appendix 2), which led to a request from service managers (December 2004) to develop this process for use within the authority. During the spring and summer terms of 2005 a working group of people from education, CAMHS, social services and early years has been trialling and developing this process. It is anticipated that this will be shared with other services in the autumn of 2005. The process is also being presented at a national training event on effective multi-agency working in October 2005.

In terms of dissemination and impact the aim of achieving local guidance on how to manage conflicts through negotiation is being achieved and there is the potential to influence practice on a wider scale through publication and national presentations. This assignment has been rewritten in collaboration with Andy Miller and submitted for publication in a national journal.

Assignment 5 was a quantitative study that was intended to build on the reading undertaken in Year 1 related to outcomes for pupils in public care. It was titled:

"Resilience: A study of risk and protective factors from the perspective of young people with experience of Local Authority care."

The concept of resilience had previously been used to explore risk and positive adaptation amongst groups of people experiencing adversity in an attempt to identify protective factors that enabled them to succeed despite the odds. A retrospective study of successful adults who had been through the care system identified risk and protective factors related to systems and environment. This study asked 15 young people aged between 12 and 18 years of age with experience of local authority care for their views of what had helped and/or hindered them and applied a resilience framework to interpret the findings.

The study aimed to:

- Establish whether young people with experience of local authority care would demonstrate risk and positive adaptation factors highlighted in previous research

- Establish specific actions and/or events that young people found helpful/unhelpful particularly in relation to the services they received from the local authority
- Identify resilience amongst participants and establish whether their responses were significantly different from less resilient participants
- Explore patterns of resilience

Resilience could be identified in young people with experience of local authority care using a risk and protective factors framework. Differences in resilience appeared to be related to the accumulation and number of risk and protective factors rather than any one single factor. An increase in protective factors and decrease in risk appeared to be strongly linked to significant life events, which provided turning points in a young person's development. It was hoped that this study might lead to a framework for assessing risk and protection in relation to the system and environmental factors that affect individuals with experience of local authority care, and it was also hoped that this framework might be adapted as a tool for evaluating services to young people by considering the extent to which these services increased protective factors and reduced risk.

Because this study was part of a best value review of services in one local authority the dissemination initially took place in that authority and involved presentations to the elected members, directors of education and social services and service managers from the range of services involved. The findings have also been incorporated into local and national training events:

- Maximising Life Chances for Children and Young People in Public Care (a multi-agency training programme delivered twice a year to 15-20 carers, social workers, designated teachers etc.)
- North Lanarkshire Teachers Training Programme (20 teachers, August 2004)
- Glasgow Family of Schools INSET (350 teaching staff, February 2005)

- New Directions in Behaviour Support Conference (30-40 support staff 17th September 2004, 23rd April 2005)

Future training events include a presentation to Nottingham City Community Educational Psychology Service (October 2005) and North Tameside Children Looked After Conference (November 2005).

In terms of dissemination and impact it is hoped that the feedback to the local authority where this study was conducted led to a change in practices. It is also hoped that this study has the potential to influence practice on a wider scale through publication and national presentations. This study was rewritten and published in Support for Learning in November 2004 (Dearden 2004).

THE END – YEARS 3 AND 4

The choice of topic for Assignment 6 involved a consideration of a range of options including:

1. Building on the multi-agency work that was happening as a result of Assignment 4 to develop a process for principled negotiation
2. Developing the use of the resilience framework from Assignment 5 to evaluate services to young people with experience of public care
3. Building on a project on inclusive schools that was being undertaken for the Alliance for Inclusive Education
4. Beginning a totally new project on Facilitated Communication Training (FCT).

Despite the fact that it might have been a lot easier to pursue any one of the first three options my intense interest in FCT led to this being the chosen area of study. I had met FCT users in the United States in December 2002 who had challenged my assumptions in relation to the abilities of people with no spoken language, particularly those on the autistic spectrum and I had decided that one way of reconciling my previous practice with the new knowledge I had gained was to find out more about FCT and explore how it might be made available to young people in the UK. I had been actively networking with a range of people involved in FCT and felt that I had enough knowledge and potential support to embark on studying this controversial topic.

The title "Introducing Facilitated Communication Training – An Action Research Project" developed once the Local Education Authority had agreed to fund a pilot project to explore how FCT could be introduced in order to enhance the communication of young people who had been identified as not having had access to the means of achieving their communication potential. Action research and collective case studies were the main methodologies used. Action research was found to support the introduction of FCT and the outcomes indicated significant gains for some pupils. The majority of adults reported changes in their knowledge, use and attitudes towards Alternative and Augmentative Communication (AAC) and FCT, which many attributed to an increased belief in pupils' potential.

It was hoped that this study would provide a base for developing the use of FCT within the local authority and at the same time provide some insights into how this technique can be supportive to some people. The results are currently being collated into a report for the Local Authority with recommendations for future policy and practice. There has already been a commitment from the local authority to support further implementation of the project and further local training will take place in October 2005 and February 2006. There has also been a proposal to develop a joint research facility between a local university and the education authority to study communication and inclusion (Appendix 3). Dissemination and impact locally is therefore likely to lead to an increase in the number of adults trained to implement AAC/FCT and an increase in the number of pupils benefiting from this intervention. The extent to which this will impact regionally, nationally or even internationally is currently unclear, however there is every intention to include the findings from this study in the accredited training delivered by Bolton University as well as regional and national training events. Ideally the negative historical and socio-cultural discourse associated with FCT may come to change over time to include theoretical constructs such as mediated learning and activity theory.

SUMMARY

From a student's perspective the impact of studying for the doctorate of applied psychology (educational) has had a considerable influence on the development of my knowledge, understanding and practice. My knowledge of the differences between research methods and how to conduct rigorous, quality research has enhanced my work in the LEA and supported my independent work which involves training and consultation. For example, it is reassuring to be able to confidently quote a wide range of research including my own in local and national training events and confidently discuss methodological issues in relation to evaluation projects in other LEAs.

In my view the purpose of "developing research skills, enabling quality investigations of subjects of importance" has been achieved. The three main studies undertaken have led and/or will lead to dissemination through local and national training and publications which increases the potential for this work to impact on policy and practice.

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APPENDIX 1: OVERVIEW OF APPROACHES TO RESEARCH

These descriptions have been drawn from a range of sources including Cohen and Manion 1989, Cohen et al 2000, Silverman 2000, Robson 1993, Lunt 1998, Norwich 1998, Burden 1998*.

ONTOLOGICAL ASSUMPTIONS

(nature of social phenomena)

Nominalist/Idealist ←	→ **Realist**
• social reality is a product of individual consciousness it is shaped and created, constructed by observers and is multi-faceted • objects of thought are words dependent on/result of the observer thinking, categorising and processing • the world exists but different people construe it in very different ways • organisations are invented social reality Cohen (et al 2000)	• social reality is external to the individual, imposed from without and can be measured • objects are not dependent upon the observer, objects exist independently of the observer • the world exists and is knowable as it really is • organisations are real entities with a life of their own

EPISTEMOLOGICAL ASSUMPTIONS

(bases of knowledge)

Anti Positivist/ Post Positivist ←	→ **Positivist**
• knowledge is soft, personal, subjective, unique • knowledge is personally experienced (Burrell and Morgan 1979)	• knowledge is hard, objective and tangible • knowledge can be acquired

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* Full references are provided at the end of this appendix

RELATIONSHIP BETWEEN HUMAN BEINGS AND THEIR ENVIRONMENT

Voluntarism ◄	► **Determinism**
• people creators of environment, controlling • people active, subjective participants	• people conditioned by external circumstances, controlled • people passive, neutral objects
Naturalistic ◄	► **Mechanistic**
Humanistic	**Behaviourist**
• context bound/natural setting • people initiators of own actions, active, intentional, creative • people involved in own life experience • free will occupies centre stage (Burrell and Morgan 1979) (Lincoln and Guba 1985)	• not context bound • people respond mechanically to environment • people standing apart form experience • people products of the environment

FOCUS OF METHODOLOGIES

Idiographic ◄	► **Nomethetic**
• explanation and understanding of what is unique and particular to individual situations (not general) Cohen (et al 2000)	• establish general laws about human behaviour (Lunt 1998)
Interactionist/Interpretative	**Normative**
• search for meaningful relationships and discussion of consequences for action • behaviour seen as actions which are intentional and future orientated • focus on perspectives and personal and social meanings • theories and concepts arise from the enquiry, emergent Cohen (et al 2000)	• behaviour is rule governed • behaviour is a response to external stimuli and cause of behaviour lies in the past • complex methodologies distance researcher from experience and understanding • validation of theories, limit to what can be firmly established • abstraction of reality through mathematical models
Hypothesis generating ◄	► **Hypothesis testing**
Flexible	**Fixed**
Subjective	**Objective**
• researcher involved with subjects/participant	• researcher as observer

TYPES OF METHODOLOGY

Illuminative evaluation	Traditional Scientific method
• shed light on a situation, make things clear and is helpful to those involved (construct a recognisable reality) • focus on actions of ordinary people in everyday lives • takes account of context, gathers as much information as possible from a number of different perspectives and levels (Burden 1998)	• hypothesis • experiment, sample, isolate variables • observe correlations/patterns • explain irregularities • test explanations/predictions • accept or reject hypothesis • generalise • new theory developed
Symbolic interactionist • emergence of meanings through focusing on the nature of interaction	
Ethnography • Explores the nature of 'taken for granted' social phenomena in the everyday world to elicit a 'thick description' (Geertz 1973)	
Phenomenology • description of people's experience of various phenomena in the everyday world around them (Walker 1998)	

Other Associated Terms

Practitioner ⟷	Professional Scientist
Applied Science/Psychology	Pure Science/Psychology
New Paradigm	Old paradigm
Social constructionist Feminism Postmodernism	

REFERENCES FOR APPENDIX 1

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APPENDIX 2: DRAFT PROCESS FOR PRINCIPLED NEGOTIATION

PROCESS FOR PRINCIPLED (WIN-WIN) NEGOTIATIONS TO RESOLVE CONFLICTS (People wanting different outcomes due to for example, lack of resources, conflicting goals, conflicting roles etc.)

Statements are what you are trying to achieve

Comments are for facilitators

AIMS

Refer to briefly to set tone

- Agreement to benefit all
- Maintain/increase relationships
- Shared commitment and accountability
- Clarity of criteria for achievable actions

GROUND RULES

Separate process from content

Collate from group – could include:

- Listening
- Non-judgemental
- Respect others views
- Value difference
- Focus on issues, creative solutions
- Ideas for mutual gain
- No blame
- Conflict presents a mutual problem, joint responsibility

IDENTIFY PROBLEM

Separate people from problem

Group need to choose a problem that involves a conflict of interests e.g. agreement over who should be lead professional, a particular case etc. Ask each group member for ideas they would like to work on. Refer briefly to the fact that the problem needs to be characterised by:

- Conflicts of interests *(People wanting different outcomes e.g. EP might think SEN officer should always be lead professional but SEN officer might think that is an unfair demand on their time and the EP/BSS should be lead)*
- Willingness to work together
- Frame as a mutual problem
- Be as specific as possible about the nature of the problem

DEFINE AND CLARIFY THE PROBLEM

Separate problem from solution

Just like problem description in solutions circles, circle of adults

- Origins and nature of the problem
- Impact and effect on others
- What's it look like, what would I see?

DESCRIBE INTERESTS = REASONS

Separate positions (what a person wants or thinks) from interests (why a person wants of thinks as they do).

Each person states wants/needs/goals and feelings describing why a particular outcome would be favourable to them – it's the WHY that is important and makes interests explicit, uncovers hidden agendas etc.

Separate emotions from negotiation

Feelings also important to name and acknowledge so they do not get in the way of problem solving.

Could do this individually or pairs first write on post its then feedback to whole group or do as whole group from the start – depends on time and size of group

- Wants Why?
- Needs Why?
- Goals Why?
- Feelings Why?

IDENTIFY COMMON INTERESTS

Separate commonalities from differences

Ask the group to spot common interests. Could just tick common interests that have been recorded, highlight, circle or if used post its group them together.

- Where are the common interests?

AGREE CRITERIA FOR SELECTING/CHOOSING AN OPTION

Separate criteria from selections

Agree criteria for choosing an option – some suggestions that might come out/help model the idea:

What would good outcome consist of?

- Mutual benefit
- Fair
- Maintains relationships and opportunities to support
- Achievable
- Practical
- Effective use of resources

BRAINSTORM OPTIONS

Separate options from choices

Straightforward brainstorm, no debating, record all ideas, value the creative, ideally record on a grid

- Creative opportunities for mutual gain
- Say all ideas no matter how different they may sound

AGREE AN OPTION

Establish which options fit with the criteria e.g. are fair, mutual benefit to all etc.

Could just tick, use grid or these other tools depending on time:

- Compare options against criteria

GRIDS

	Option 1	Option 2	Option 3	Option 4
Criteria 1	YES	NO		
Criteria 2				
Criteria 3				
Criteria 4				

Tools to use if stuck:

AGREEMENT LEVELS *for a specific option to test levels of agreement amongst group, each person rates their level of agreement – 1 = no agreement, 10 = full agreement*

1 2 3 4 5 6 7 8 9 10

———————————————————

X X X X

X X

X

DOT VOTING *for gauging most favourable options amongst many – coloured dots e.g. red = top option, blue = least favourable option – people put coloured dot next to options – gives quick easy access to group interests*

Options

1. _____ ooo
2. _____ ooooooo
3. _____
4. _____
5. _____ oooo

AGREE ACTIONS

Usual first steps, by whom, when review date etc.

- Who will do what, when, who with etc.

REFLECTIONS ON PROCESS

Usual reflections on how the process felt as a tool for collaborative working.

- Reflection words on how it felt to use this process

APPENDIX 3: DRAFT RESEARCH FACILITY PROPOSAL

DRAFT PROPOSAL
JOINT RESEARCH FACILITY (COMMUNICATION AND INCLUSION)

PRINCIPLES

- Innovation and adaptation to increase equal opportunities and inclusion
- Diversity as a strength to enhance dialogue and debate and contribute towards what is meant by effective inclusion in it's broadest sense
- Exploration and description of effective practice in a complex area

These principles also to relate to at least three of the principles of reform detailed in the DfES 5 year strategy for children and learners July 2004 specifically in relation to developing:

- Effective partnerships between schools, universities and the local community in supporting change
- Greater diversity of provision and providers
- Freedom and autonomy to innovate and adapt

PURPOSE

- To support and develop inclusion of people within their local communities
- To support and develop the use of collaborative action research to promote social change
- To develop and promote evidence based practice and practice based evidence in relation to inclusion and communication

PRIMARY AIM

- To increase effectiveness of provision and practice specifically in relation to people with severe communication impairment from pre-school to higher education

ESSENTIAL ELEMENTS

- Action research facility
- Teaching/training facility

- Networking/support/advocacy facility

POTENTIAL USERS

- Local community, disabled pupils and adults, parents and carers
- Voluntary organisations
- Schools and teaching staff, including TA's
- LA support staff from health (e.g. speech and language therapists), education (e.g. inclusive education service, educational psychology service) and social services (e.g. children and disabilities team)
- University students and staff (e.g. psychology, education, social science departments)
- LEA divisions (e.g. commissioning research)