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Intensive Interaction: the Published Research Summaries Document

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Introduction

The 'observable' outcomes of Intensive Interaction

Across the general body of research into Intensive Interaction (summaries of many papers being collated in this document) there are a number of findings of increased or novel interactive responses common across a number of the studies. Listed below are some of these 'external', observable and therefore measurable interactive outcomes associated with Intensive Interaction interventions when compared to initial baseline measures:

- **increased social anticipation, initiation and/or engagement:** as evidenced in: Nind, 1996; Watson & Fisher, 1997; Kellett, 2000; Cameron & Bell, 2001; Kellett, 2003; Kellett, 2004; Forster & Taylor, 2006; Anderson, 2006; Barber, 2008; Samuel et al, 2008; Zeedyk et al, 2009a; Zeedyk et al, 2009b; Jones & Howley, 2010; Fraser, 2011; Argyropoulou & Papoudi, 2012; Harris & Wolverson, 2014; Rayner et al, 2016.
- **increased toleration of, or responsiveness to physical proximity:** as evidenced in: Nind, 1996; Firth et al, 2008; Zeedyk et al, 2009a; Zeedyk et al, 2009b; Fraser, 2011; Harris & Wolverson, 2014.
- **increased levels of contingent smiling:** as evidenced in: Nind, 1996; Lovell et al, 1998; Leaning & Watson, 2006; Barber, 2008; Zeedyk et al, 2009a; Argyropoulou & Papoudi, 2012.
- **increased levels of eye contact or looking at another person's face:** as evidenced in: Watson & Knight, 1991; Nind, 1996; Lovell et al, 1998; Kellett, 2000; Cameron & Bell, 2001; Kellett, 2003; Kellett, 2004; Kellett, 2005; Leaning & Watson, 2006; Forster & Taylor, 2006; Barber, 2008; Samuel et al, 2008; Zeedyk et al, 2009a; Zeedyk et al, 2009b; Fraser, 2011; Argyropoulou & Papoudi, 2012; Harris & Wolverson, 2014.
- **increased use of vocalisation:** as evidenced in: Watson & Knight, 1991; Lovell et al, 1998; Kellett, 2000; Elgie & Maguire, 2001; Cameron & Bell, 2001; Argyropoulou & Papoudi, 2012; Harris & Wolverson, 2014.
- **increased levels of socially significant physical contact:** as evidenced in: Lovell et al, 1998; Kellett, 2000; Elgie & Maguire, 2001; Kellett, 2003; Kellett, 2004; Forster & Taylor, 2006; Firth et al, 2008; Barber, 2008; Samuel et al, 2008; Argyropoulou & Papoudi, 2012; Harris & Wolverson, 2014.
- **improved levels of joint attention:** as evidenced in: Nind, 1996; Lovell et al, 1998; Kellett, 2000; Kellett, 2003; Kellett, 2004; Kellett, 2005; Leaning & Watson, 2006; Samuel et al, 2008.

Evidence of rapid change in social interactivity associated with Intensive Interaction

Instances of rapid change in social interactivity are often anecdotally related by practitioners using Intensive Interaction techniques with people for the first time, particularly when employing the techniques of behavioural mirroring or vocal echoing. Also empirical support for such claims of rapid 'social inclusion' (Firth, 2008) comes from short-term research evidence e.g. Lovell et al, 1998; Zeedyk et al, 2009a; Zeedyk et al, 2009b; Argyropoulou, & Papoudi, 2012; Harris & Wolverson, 2014

Indeed, in the study using 'micro-analytic analysis' of Intensive Interaction by Zeedyk, Caldwell & Davies (2009b), it was shown that for all the participants Intensive Interaction was: '… *effective in promoted social engagement ... well before the end of the first full intervention session',* with some changes being seen to *'occur within minutes*'.

Evidence of gradual development in aspects of communication associated with the extended use of Intensive Interaction

In addition to the potential for rapid increases in sociable communication over short timescales, the use of Intensive Interaction over longer periods has been evidenced to demonstrate a 'developmental aspect' (Firth, 2008) as an outcome to systematic and sustained approach adoption.

Such extended use of Intensive Interaction has been shown to facilitate gradual and sustained development in certain aspects of communication practice for people with severe or profound intellectual disabilities and/or autism e.g. Watson & Knight, 1991; Watson & Fisher, 1997; Nind, 1996; Kellett, 2000; Jones & Howley, 2010; Fraser, 2011.

Part A: Research with Child Participants

An Evaluation of Intensive Interactive Teaching with Pupils with Very Severe Learning Difficulties

Watson, J. & Knight, C. (1991) *Child Language Teaching and Therapy*, 7 (3), 310-25.

This article describes an exploration of Intensive Interaction by staff at a school for pupils with severe learning difficulties, in Edinburgh. In this one-year study, the researchers attempted to analyse the skills used in infant-parent interaction and apply them to their educational situation via Intensive Interaction.

Participants: Six pupils with severe learning difficulties were studied over the school year. They were chosen to represent a range of age and ability. Some pupils exhibited specific idiosyncratic behaviour related to their special needs, physical condition and history, which were not shown by others. Six members of staff consistently worked on interaction with a given pupil over this period of time.

Method: Staff were asked to behave as naturally as possible, and to introduce a toy or object that they felt would be interesting to the child at some point when they felt it was appropriate to do so. The beginning of the session was signalled by taking off the pupils' shoes and leading them into the soft play area. The entire session was filmed, with the researcher holding the camera and trying to be as inconspicuous as possible. The only interruption was due to extraneous noises from other pupils in the class.

Directly after each session staff completed an interaction recording form. This involved outlining the sequence of events, identifying the best and worst parts of the session and commenting on how they felt the session had gone. Additionally, summaries of each session and detailed descriptions of short extracts were made from the videotapes.

Sessions were usually terminated when the staff member decided that the pupil had had enough, on the basis of yawns or decreased responsiveness. Each of the six members of staff were interviewed individually after the videotaping of the study had ended.

Findings: From this study it appeared that interaction was very important for the pupils, and staff emphasised the fact that '*it builds a good relationship*' and '*there is confidence and trust that is built up*'. Staff also talked about other positive effects of Intensive Interaction, which included positive outcomes for the other pupils in the class; staff being more relaxed and more willing to wait for a pupil's responses; and improvements in staffs' observation skills.

In general, it was claimed that staff developed high levels of expertise, and that the interactive experiences '*had benefited their pupils and improved their own working practice*'. Staff also claimed that the positive effects of the interactive experiences '*also extended to other pupils in the class*' as the staff had become '*more relaxed, more tolerant, and more willing to wait for responses*'.

Evaluating the Effectiveness of Intensive Interaction Teaching with Pupils with Profound and Complex Learning Disabilities

Watson, J. & Fisher, A. (1997) *British Journal of Special Education,* 24 (2), 80-87.

This research evaluated two teaching methods, including the use of Intensive Interaction, and was carried out in a Scottish school for pupils with very severe learning difficulties and multiple impairments. Six staff-pupil pairs were studied over nine months, with the study attempting to observe any changes in the pupils' behaviour. The question under research was whether Intensive Interaction experiences are especially facilitatory in comparison with other school experiences.

The Participants: The participants were pupils with very severe learning difficulties and often multiple impairments, aged between 10 and 19 years.

Research Study 1 - Methods & Findings: Intensive Interaction sessions were videotaped at six week intervals on up to six separate occasions for each staff-pupil pair (the same staff member worked with each pupil over the whole period). The use of the Pre-verbal Communication Schedule (PVCS) enabled the researchers to assess the pupils' typical communicative behaviour during the classroom activities. From the PVCS assessments and the data from the videotapes, the authors claimed that there were some '*striking*' examples of social or communicative behaviours evidenced during sessions of Intensive Interaction that were not observed during '*other classroom activities*'.

Research Study 2 - Methods & Findings: In this study the teacher used two distinct teaching methods, Intensive Interaction and teacher-directed group activities. During the teacher-directed group time the children took part in '*music and movement activities, with specified goals planned and controlled by the teacher*'. The researcher gathered evidence using recording sheets and video recording. From the analysis of their findings, the authors claimed that Intensive Interaction was '*a more rewarding social experience*' for the pupils, and one '*in which they showed initiative and control*' over the nine-month period, and pupils tended to be '*passive recipients*' of the teacher-directed group activities. During the Intensive Interaction sessions all the pupils '*demonstrated higher levels of active participation and enjoyment*'.

Discussion: The findings from both studies imply that Intensive Interaction not only adds to the quality of life of the pupils, but also that they learn to apply new skills. In the Intensive Interaction sessions the pupils were found to show '*greater levels of engagement and initiated communications more effectively than during other class activities where they played a more passive, responsive role*'.

The authors therefore claim that '*more emphasis should be placed on physical contact and handling, and on a more playful approach to the curriculum*'. The authors also assert that '*the importance of such experiences, which enable more meaningful involvement in their [the pupil's] social world, cannot be overstated*'.

Sam's Story: evaluating intensive interaction in terms of its effect on the social and communicative ability of a young child with severe learning difficulties

Kellett, M. (2000) *Support for Learning* 15 (4), 165- 171.

This research paper concerns a single case study that was part of a larger, more comprehensive longitudinal study of the use of Intensive Interaction in the early education of children with severe learning disabilities.

Participant: Sam was a five year old boy at a community special school, and he was half way through his reception class year. His communication abilities were judged to be '*at the very early pre-verbal stage*' and he was indicated by the school staff as living '*in a world of his own*'. He did not use any symbolic language or formal signs, made no eye contact with other people and appeared not to observe, nor respond to, other peoples' facial signalling. He often engaged in self-stimulatory behaviour such as '*finger play and repetitive jiggling*'.

Method & Findings: Using a '*multiple-baseline interrupted time series methodology*' combined with weekly systematic video-recorded observation over a period of one academic year, the author shows just how much progress Sam made after the initiation of daily 10 minute sessions of Intensive Interaction. Also employed for data generation were two published assessment measures; Kiernan and Reid's *Pre-Verbal Communication Schedule,* and an adaptation of Brazelton's *Cuddliness Scale.*

From this research the major claims made for Sam's observed responses to the Intensive Interaction intervention included:

- *'Huge steps'* forward for Sam in *'Looking at or towards a partner's face'*
- *'Modest progress'* in the incidence of 'social physical contact'
- Sam's ability *to 'attend to a joint focus or activity with the teacher… developed dramatically'*
- *'Clearly evident'* progression for Sam in the incidence of *'eye contact'*
- Sam's vocalisations *'changed considerably'* and he *'began to use his vocalising ability to respond contingently and to initiate contact'*
- A highly significant increase in the time Sam spent *'engaged in social interaction'*

Discussion: In conclusion, the author cautions against generalising too much from the findings of this single case study. However, with this study the author shows how slow progress can be made visible for one of her participating pupils in a non-comparative or judgemental way. Furthermore, although the paper carries a serious academic message, and delivers vitally important evidential backing for the use of Intensive Interaction, it does so in such an optimistic and engaging way that it would be difficult not to be uplifted and personally moved by reading it.

Teachers' talk styles: communicating with learners with severe and complex learning difficulties

Nind, M., Kellett, M. & Hopkins, V. (2001) *Child Language and Therapy*, 17 (2), 143-159.

Some Background: the authors of this paper argue that the communication difficulties experienced by those with severe or profound learning disabilities have been typically attributed entirely to the learning disabled person, and therefore interventions are usually aimed at enhancing **their** communicative abilities. In this paper, Intensive Interaction is conceptualised as '*transactional*' in nature, and as such difficulties are seen as arising from both sides of the communication process.

The authors note that research studies indicate that parents of disabled children tend to adopt a more directive approach to communication, whereas in contrast, mothers of typically developing children adopt a less directive style of interaction labelled '*Motherese*', which uses slow, simple language with an exaggerated use of pitch. It is suggested that '*Motherese*' is designed to maximise the engagement level and understanding of the child. '*Motherese*' is also noted to employ vocalisations in unison with the child, use imitations of vocal pitch, rhythm and duration and promote the use of turn-taking, techniques similar to those used in Intensive Interaction.

The Method: This study examined the interactive talk of teachers engaging in Intensive Interaction, and the degree to which '*Motherese*' was used to engage their learners. 4 teachers were each asked to submit 2 video clips of them practising Intensive Interaction with a partner. These videos were rated for evidence of '*Motherese*', with the authors also identifying if some particular features of '*Motherese*' were more common than others.

The Results: the results showed that in all of the 8 videos '*Motherese*' was demonstrated, although the amount used varied considerably between participants. No particular feature of '*Motherese*' was found to be evident in all of the videos, suggesting that the use of the *Motherese* style is individual to each interactor.

The teachers who were identified as most successfully engaging their interactive partners were noted to employ a wide range of elements of '*Motherese*' in their interactive repertoires (although these elements were not used on every occasion). '*Contingent Vocalisation*' or '*joining-in*' was identified as a core feature of '*Motherese*', and it was indicated as being more naturally used than other aspects.

Some Discussion: This research found '*Motherese*' to be an important component in the more successful interactions observed between teachers and learners with severe or complex learning difficulties. From this the authors concluded that the differentiated interactive styles highlighted were evidence that the teachers were influenced by their interactive partners, and modified their own interactive approaches accordingly. The authors believe that such a finding implies that the source of any identified communicative difficulty does not lie entirely with the learning disabled person. Instead they identify a shared or 'transactional' model as a more accurate representation of the communication difficulties experienced by people with severe or profound learning disabilities.

Catherine's Legacy: social communication development for individuals with profound learning difficulties and fragile life expectancies

Kellett, M. *(*2005) *British Journal of Special Education,* 32 (3), 116 – 121.

This paper summarises case study evidence of how an 11-year-old girl's quality of life was transformed by the adoption of Intensive Interaction. Despite the objective research perspective of such a paper, published as it was in such a highly regarded academic journal, what emerges is a very emotive and powerful story about one young girl's dramatic social development in the last few months of her short life.

In this paper Dr Kellett, of the *Children's Research Centre* at the Open University, also explores the methodological and ethical considerations concerning research with children with the most profound disabilities and fragile life expectancies, and the likely implications that individual life experiences may have for policy and practice in this area.

The Participant: Catherine, the focus of this paper, was 11 years old and at home with her family. She had profound learning disabilities compounded by quadriplegia, perceptual impairments and severe and frequent muscle spasms and seizures. She was physically very frail and suffered frequent infections and illnesses.

The Method: prior to the Intensive Interaction intervention at her school, Catherine was perceived by staff as being entirely passive, making no eye contact or vocalisations. Once the Intensive Interaction sessions commenced and a limited amount of video footage was gathered and analysed, dramatic developments were observed in two particular areas, those of eye contact and the ability to attend to joint focus activities.

The Results: Catherine's engagement in eye contact was seen by the researchers as '*a tremendously important development*' as it had changed from '*zero incidences'* prior to the use of Intensive Interaction. Also noted were new behaviours that developed shortly before Catherine died, one being a '*turn-taking*' vocalisation activity using '*tutting*' sounds based around Catherine constantly blowing saliva bubbles, which developed into a '*raspberry blowing*' game, and it was during this activity that staff felt they were '*really connecting*' with her. The video on which the observations were based are described as '*alive with smiles, eye contact, warm physical interaction and the sound of Catherine using her tongue in a 'tutting' sound as part of a playful imitative game*'.

Also reported were the development of similar interactive communication within Catherine's family and the generalisation of new found communication outside of the research scenario. Catherine's mother started to use the approach after watching some of the research sessions, and was reported to particularly enjoy the '*tutting*' and '*bubble blowing*' games with Catherine. During these times Catherine's mother was happily '*rewarded with smiles and eye contact*' and she also described the joy of the family in being able to finally connect with Catherine. She also very movingly stated that the '*last few months were their happiest times together*'.

Some Discussion: As Dr Kellett concludes, Catherine's study '*adds to our knowledge and understanding of communication development for individuals who are similarly frail and profoundly impaired*', and she goes on to state that '*Catherine is no longer with us but she has left a rich legacy behind her*'.

Early Communication strategies: using video analysis to support teachers working with preverbal pupils

Anderson, C. (2006) *British Journal of Special Education*, 33(3), 114-120.

Introduction: Based on the view that children with complex learning difficulties have special educational needs, this article examines communication interactions between teachers and pupils. The aim is to see if the communication strategies employed impact the interaction. Past research has shown that adults frequently did not respond to children's communication attempts nor did they allow pupils to initiate interaction (Ware and Evans, 1986).

Furthermore Beveridge and Hurrell (1980) found that teachers could maintain an interaction by immediately responding either verbally or non-verbally or could discourage pupils by ignoring or not responding to an initiation. Nind, Kellett and Hopkins (2001) observed that teachers with a wider range of *'motherese'* techniques tended to be more successful in engaging students.

Aims and Objectives: The purpose of the research was to identify strategies teachers and pupils used during interaction across three aspects:

1 – The number of turns pupils and teachers took during interactions.

2 – The three language function strategies used most frequently to initiate and respond.

3 – Average word counts and average information carrying words used by teachers and pupils.

Methodology: 8 teachers and 12 pupils participated in the study. The teachers experience in working with pupils with learning difficulties ranged from under a year to over 18 years. The pupils ranged in age from 5 to 16 years old, and were at the earliest stages of communication development, functioning at or below the 'two-words together' level of language. Twenty-eight video-taped sessions were sampled purposively (purposive sampling is where a sample is selected in a deliberate and non-random fashion to achieve a certain goal). 36% of the videos were coded by the author's supervisor; giving an inter-observer reliability of over 0.9.

The videos were transcribed for both verbal and non-verbal behaviours and then coded using qualitative analysis for:

a) ***Turns*** – a verbal element or utterance and non-verbal elements, or both.
b) ***Initiations*** – a conversation or causing a change in topic or subject shift.
c) ***Responses and strategies*** – these are turns where a reply is made to an initiation which relates to the shared subject or slightly extends it, or checks that the turn was understood by the listener.

Results: ***Turns*** - Teachers took the lowest number of turns when adopting intensive interaction principles than when using the "traditional" teacher-dominant approach. When looking at the same pupil with different teachers the results indicate that the teacher's interaction styles determine how much of the conversation is shared between the two partners.

Strategies – The strategies used most frequently by the teachers to initiate an interaction were questioning, commenting, or gaining the pupil's attention. Teachers used commenting, gaining attention or repeating/simplifying most to respond in an interaction. The pupils initiated interaction most frequently by showing interest, commenting, and vocalising. Their most frequent responses were by showing interest, making an affective response, or by comments.

Word counts – For the teachers the number of words used ranged from 0 (teacher adopting Intensive Interaction principles) to an average of 4 words. However the number of words used varied based on the individual abilities of the child, for instance for an easily distractible child the teacher used less words and relied more on Makaton signs with verbal cues.

Conclusion: The results indicate that the manner in which a teacher communicates with someone with a learning disability does affect how the interaction progresses and the level of engagement from the individual. Adopting teaching styles to match the pupil's level of understanding and idiosyncrasies allows for greater participation from the pupil and perhaps a more rewarding experience for them.

Using Intensive Interaction to add to the palette of interactive possibilities in teacher-pupil communication

Barber, M. *(*2008) *European Journal of Special Needs Education*, 23 (4), 393-402.

In 2003 a scheme was launched to introduce Intensive Interaction to Bayside Special Developmental School in Melbourne, Australia. The school had 80 pupils with moderate to profound learning disabilities, with ages from 2-18 years. Class sizes varied from 4 to 8 pupils staffed by one teacher and one support worker.

After initial staff training, 11 pupils were selected as being suitable for the study, the selection criteria including the pupils' apparent communication difficulties, high levels of social isolation, as well as '*large amounts of time spent in ritualised, self-oriented behaviours*'. Staff were asked to record the participants' baseline behaviours, and to think about how to interact or make their presence known. Baseline videos of at least five minutes length were made for each pupil showing them in group activities and '*individual teaching sessions*'.

Intervention: During the 30 week intervention period staff interacted with pupils using Intensive Interaction techniques, rather than ones which were task or outcome focused. These were often initiated by pupils themselves during "downtime" and informal periods. Staff observed the activities that appeared to lead to increased sociability and positive affect. When the pupils did not appear to show interest, staff tried to "intrigue" them into becoming involved.

Evaluation: Staff met and discussed the video footage to reflect on their success during the process. After 30 weeks Intensive Interaction was being used more widely in the school in formal and informal settings. Videos were made of 6-15 minutes duration, and these were rated on a second by second basis, and staff looked for the following "indicators of involvement" (adapted from Kellett & Nind, 2003) were noted and compared: "No interactive behaviour"; "look at face"; "smile"; "socially directive physical contact"; and "engaged".

Discussion: the data collected appeared to show an increase in the social activity and engagement of the pupils, and this, taken together with comments from staff about the increased "trust" of the learners, would suggest that Intensive Interaction has been useful. The periods of "no interactive behaviours" decreased between the baseline and evaluation period. This may reflect the difference between the pupil and the teacher interacting in the conventional sense i.e. a pupil responding to a set task or object of focus, and the teacher confirming this response, and the more relaxed dialogue of Intensive Interaction where the teacher responds to their pupil's idiosyncratic, potentially communicative behaviour.

There was also an increase in the pupil initiating and engaging in social contact with their communicative partner. Things like physical proximity, touch, turn taking and interactive game playing increased much more after the intervention period. It was noted that student "J" regularly used touch as a communication tool and student "A" was prompted to use touch a lot more as a result of the support worker's use of spinning saucers.

It was noted that the students (all with ASD) appeared to want to engage the communicative partner from a social point of view, not a purely functional one. Also, positive affect increased and the pupils gazed more directly at their partners and the pupils engaged for longer periods.

Conclusion: The report recognises that, while the results are limited, it appears to show the positive effects of adopting Intensive Interaction in schools as a means of increasing the sociability and expression of pupils with profound multiple learning disabilities and autistic spectrum disorder.

The paper also acknowledges the effect that teachers can have when they employ the approach. Teachers are not as limited when a session is not outcome focused, and this makes a session more enjoyable for both teacher and pupil, and more satisfying interactions take place when the teacher responds to the student's individual behaviours.

Fostering Social Engagement in Romanian Children with Communicative Impairments: Reflections by newly trained practitioners on the use of Intensive Interaction

Zeedyk, M. S., Davies, C., Parry, S. & Caldwell, P. (2009) *British Journal of Learning Disabilities,* 37 (3), 186-196.

This paper reports on a study on the effectiveness of Intensive Interaction being used in Romania with children with severe communicative impairments. The children, in state care having been either orphaned or abandoned, attended a specialist day care centre on a daily basis. They were aged 4–15 years and displayed severe developmental delays (although no diagnoses were available their behaviours suggested autism, profound learning disabilities, and sensory impairments). All were socially withdrawn and frequently engaged in self-harm (e.g. biting their hand, scratching themselves, hitting their head). Many also had difficulties in walking or feeding themselves.

In this study, a group of UK volunteers (aged 16-25 years) worked closely with the children for a 2-week period. They were given a brief training session in the basics of Intensive Interaction, and then encouraged to use it with the children. After two days' experience, the volunteers were asked to write an account reflecting on their experiences of using this approach. This paper provides a qualitative analysis of those written accounts.

Results and Discussion: Some of the most frequently cited changes in the children's behaviour were perceived to be: an increase in the children's attention to their partner; an increase in the amount of positive affect displayed by the children; and an increase in their proximity to others. Such shifts were frequently associated with changes in vocalisations and animation. Finally, increased flexibility and ease in interactions seemed to provide a particularly strong indicator of increased engagement. Also reported by 8 of the 12 volunteers was a noticeable decrease in distress and self-harming behaviour in more than one third of the children with whom they interacted. For a small number of children, an additional positive outcome was an increase in the level of their attention to the wider environment, strengthening the evidence that Intensive Interaction promotes interests across a range of domains, rather than the social domain alone.

Overall, the study found that the kinds of behavioural shifts predicted in the Intensive Interaction literature were observed by the volunteers. Although the study did not examine the children's behaviour in detail, the volunteers perceived dramatic and prolonged increases in the children's social engagement. Such reports indicate that one does not need to be an experienced practitioner to be aware of those changes.

Below are just a few of the many extracts from the volunteers' testimony:

'I started by just imitating Paula's actions for a few minutes… then I introduced sounds… over the next 10 minutes of imitation, she was right next to me and put her hand in my lap, allowing me to stroke her hand and was smiling and even giggling, which I haven't really seen her do before'.

'Today has been amazing … I imitated Andrei, via clapping in different rhythms and also clapping around him, not just the way he prefers to. It means it does feel you are having a conversation with him, or playing a game'.

'For the first part of the week, Mircea was very quiet, making only infrequent noises…. When Intensive Interaction *was tried, Mircea became much more engaged and began to look directly at the person holding him, rather than over their shoulder'.*

'I think the technique really worked. Paula didn't get anxious or upset during the whole session, which really amazed me because normally she gets upset at least once during the session'.

'By the end of the week, Flavius actually picked up a toy from the grass, and I've never seen him do that'.

Conclusions: The authors interpret the results of this study as providing qualitative evidence that Intensive Interaction is effective in promoting social engagement in children with severe communicative impairments that arise from (or are at least exacerbated by) poor early care. The findings also demonstrate that such increases can be identified by practitioners as soon as they complete their training - extensive experience is not required. Indeed, it appears that practitioners begin to be able to generate such encouraging outcomes with minimal training.

An investigation into an interaction programme for children on the autism spectrum: outcomes for children, perceptions of schools and a model for training

Jones, K. & Howley, M. (2010) Journal of Research in Special Educational Needs, 10 (2), p.115-123.

This study looked at a system of training in interactive skill building with children on the autism spectrum. The study focused on outcomes for children, the impact of the training and key features of the system of delivering the training.

The Background: The Learning and Autism Support team (LAST) is a team within the Special Needs Teaching Service (SNTS) - a multi-team resource supporting schools in one English Local Authority (LA) area. Historically, the SNTS employed play and music specialists with children with communication difficulties. What became clear, however, was the issue of continuity; while the specialists were able to forge meaningful relationships with children, these were not sustained after the intervention. Aligned to this was an increase in children with autism mainstream provision and the need to address the training needs of staff in mainstream settings. A full-time interaction specialist (Interactionist) was given the role to include the training of TAs (trainees) as an integral part of the project.

The programme was informed by approaches based on parents-infants interactions ('Intensive Interaction' - Nind & Hewett, 2001; 'Enabling Communication in Children with Autism' - Potter & Whittaker, 2001). One-to-one sessions included children engaging with the 'Interactionist', and engaging with trainees as the Interactionist mentored them.

Research approach: The research was interpretive to 'interpret the phenomena of the world in attempts to get shared meanings with others'. The research allowed the researchers to explore the perceptions of staff in relation to the impact of the interaction programme. Key research questions were identified from the outset as:

- What are the specific outcomes for children undertaking the interaction programme?
- What is the impact of the programme for trainees and schools?
- What are the key features of this system of delivering training?

Methods: Five primary schools which completed the programme over 1-year participated. The children were identified as having autism, Asperger Syndrome and autism with learning difficulties. Views were collected from SENCos, trainees and teachers in each school. The participants' views were gathered via a variety of methods e.g. questionnaires which were and followed up by semi-structured interviews. Questionnaires were also given to parents of the five children, with one returned. All interviews were recorded, transcribed and thematically analysed.

Findings: Overall, outcomes for the children were reported as positive in relation to relationships with peers and adults, improved communication skills, behaviour and enjoyment of interaction. Interaction with peers and improved friendships were described by both class teachers and trainees:

- '*He is now beginning to interact with a small number of children…*' (Class teacher)
- '*Interaction with children in the playground has been the most obvious immediate benefit*.' (Trainee)
- '*…her teacher came down and said 'I have had the longest conversation I have ever had with him*.' (SENCo)
- '*She really has enjoyed it and her behaviour… in the classroom has improved…* ' (Trainee)
- '*He can now play with two other children around home …. he is calmer for longer and can play family games*.' (Parent)

Despite some initial anxieties, most trainees viewed the programme as positive: '*…I didn't really have a clear understanding or idea of what the aim was, but I thought "interactive play, that sounds like a brilliant idea and a fantastic concept, yes please* '(Trainee). Trainees indicated high levels of satisfaction with the programme which included modelling of one-to-one sessions with the Interactionist. The training was reported to have a direct impact upon trainees' confidence in how to implement interaction approaches. The partnership between the trainee and the Interactionist was identified as a key component of the approach. Other key features included on-going monitoring, evaluation and recording. It also became clear that the key factors central to achieving the programme aims was the development of partnerships within a systemic approach. All of the schools indicated that they would continue the programme and were keen to train other TAs.

Discussion: whilst acknowledging the positive outcomes indicated for children and schools, the authors recommended caution in generalising the findings due to the small-scale nature of this study. However, regarding the impact upon children, the positive outcomes demonstrated that the aims and principles of interactive approaches have relevance for children, regardless of their cognitive ability and that such approaches can be incorporated into a mainstream practices.

It was also clear from the research that the programme design provided a clearly delineated process of professional development and support. The programme enabled TAs to participate in a journey from the trainee to autonomous programme deliverer. This study also evidenced the ability of support services to identify innovative ways of working. Implicit within this is the view that imposing an external 'expert' upon school staff can have a 'deskilling' impact, and serve to propagate the view that effective SEN support is the remit of a minority of skilled individuals.

The authors finally conclude that vital to the maintenance of an effective system are the roles, responsibilities and remits of all the key players. In the context of this study, all participants felt a sense of ownership of their respective spheres, while engaging in a partnership to ensure the success of the programme as a whole.

'The training of a child with autism in a Greek preschool inclusive class through intensive interaction: a case study'

By Argyropoulou, Z. & Papoudi, D. (2012), *European Journal of Special Needs Education,* 27 (1), 99-114.

This study examined social interactions during play between a young boy with autism and a typically developing girl, before and after the boy was trained by his teacher through intensive interaction.

Method: This study, conducted in a preschool inclusive class in a school in Athens, concerned a 6-year old boy (Philippe) who presented several key features of autism including social isolation, echolalic speech, and ritualistic behaviours. A girl, Anna with a highly developed sense of empathy, was selected as the boy's play partner. A range of materials and toys were made available during the sessions to facilitate verbal and non-verbal communication.

The two month study used an ABA single case design, with the data recorded in three different phases, baseline (A1), post-training (B) and follow-up (A2). Each phase included five sessions of 10-15 minutes over two weeks, session being videotaped and the first author keeping field notes. The children were told that the purpose was 'playing to have fun'.

Baseline Phase A1: to observe the children's behaviour to provide a baseline.

Training phase: in this phase the researcher used the same play materials used during Phase A1 and 'Intensive Interaction' techniques were used. Each session was followed by a play session between the two children.

Phase B – post training: to assess the effectiveness of the training of Philippe. The play materials remained the same. It was hoped that the 'training' would increase Philippe's desire to interact with Anna.

Phase A2: in this phase the training was withdrawn and the conditions of Phase A1 re-established.

Measurement: The success of the training was judged by coding the children's social behaviours which were categorised as initiations and responses. For each initiation, the other child's response, positive or negative, was recorded. All the data was videoed, social interactions coded, and categorised. Initiations included (a) waiving to or holding the other child's hand; (b) drawing attention to an object or activity; (c) verbal communication, i.e. making a verbal initiation or asking something of the other child; (d) body contact, i.e. kissing or cuddling the other child: and (e) giving a toy or initiating a game.

A 'response' was defined as a behaviour which followed a social behaviour by the other child. These were coded as 'positive' if a child answered a question, obeyed an order, responded positively or imitated the actions of the other child. 'Negative' responses included: (a) avoidance, when the child looked/moved away, pushed him/her, closed his eyes and did not respond when called; (b) aggressiveness when the child pushed, pulled, or scared the other child.

Results

Philippe's initiations and Anna's responses: From Phase A1 to B, the number of Philippe's initiations increased from 16 to 28. From Phase B to A2 the number of Philippe's initiations returned to the level of Phase A1. From Phase A1 to A2 there was an increase in the percentage of positive responses of Anna of 33%.

Anna's initiations and Philippe's responses: From Phase A1 to B there was an increase of positive responses by Philippe of 460%. From Phase B to A2, the number of Anna's initiations decreased from 39 to 28 (28%). From Phase A1 to A2 the number of Anna's initiations increased from 11 to 28 (155%). In Phase A2 71% of Philippe's responses were positive and 29% negative, with an increase in Philippe's positive responses of 300%. Philippe's social behaviour changed after training, during Phase B - Philippe's initiations increased by 75%, with a 144% increase in his positive responses. During Phase A2 Philippe's positive responses remained higher, reaching 72% of his total responses and decreasing only to 71% in Phase A2. This suggests that the withdrawal of training influenced the initiation level but not the level of the child's positive responses, a fact that might be explained by emotional intimacy that was created between the two children.

Before the research Philippe and Anna were acquainted but were not playing together. After the study, Anna and other peers were initiating contact with Philippe and tried to include him in their games. Philippe responded positively when with the children and seemed happy. Sometimes Philippe also made initiations to Anna. During Philippe's training a detailed sessional diary evidenced improvements in his social and emotional engagement, eye contact, verbalisations, body orientation and contact, and smile from the first session onwards.

Conclusion: This study showed that 'Intensive Interaction' helped a child with autism to increase his social engagement. His initiations increased in the post training phase but returned to the initial level in the follow up phase. However, his increased levels of positive responses to the peer's initiations remained at a high level post training.

Overall, the results of this study accord with the findings of previous research. Firstly, children with autism are more likely to engage with someone if that person provides active input. Secondly, such input is more effective when it 'scaffolds' the child with a disability through Intensive Interaction and interactive play. Lastly, 1-to-1 peer to target child ratio increases the likelihood of social initiations and interactions between a child with autism and his peer.

Naturally, a single case study during a short time period is limited, with inherent problems of generalizability. Further research is needed to determine how such 'Intensive Interaction' training can be applied in order to help the social interaction between children with communication difficulties and their peers in mainstream settings.

Intensive Interaction in the mainstream classroom: evaluating staff attitudes towards an inclusive socio-communicative intervention.

Eleanor M Lloyd (2015) *Good Autism Practice*, 16 (2), p.49-68.

Introduction: The inclusion of children with autism in mainstream schools is an important area for practice and research. Unfortunately current national strategies require children to be taught more often in whole class groupings, this being particularly challenging for pupils with autism. This project investigated the possibility of achieving inclusion via daily 15 to 20 minute sessions of a classroom-based activity called 'Communiplay' which was based on Intensive Interaction. However, Communiplay differed from 'traditional' Intensive Interaction in that it took place in small groups and was structured around play with a LEGO construction set: this being seen as inherently rewarding for the pupils with autism, whilst also promoting child initiation and adult imitation in mutually enjoyable interactions.

The project involved 6 classes (of <30 pupils aged 5-7 years) in an inner-city mainstream school. The classes included one or more pupils with a language or socio-communicative disorder. The staff teams were a teacher and two Teaching Assistants (TAs), who had a 70 minute training session on Intensive Interaction and Communiplay. Three Communiplay groups were formed in each class, consisting of: one child with a diagnosis of SEN (the 'focus pupil' who was partnered with the adult for Intensive Interaction) and two other pupils matched as play partners for each other. The teacher and TAs participated in one Communiplay group each day, and in the other groups once or twice a week.

Research design: This project combined qualitative elements with a quasi-experimental design, and collected data on the views of the teachers and TAs via: a *Relationship Interaction Assessment*, a *Team Evaluation Form*, an *Everyday Communiplay Log*, a *Mid-Invention Review*, an *Evaluation Focus Group*, and a *Structured Observation Schedule*.

Findings: the findings of this study indicated '*that Communiplay may be effective in strengthening positive staff-pupil relationships and the amount of pupil initiated interaction with staff*'. Also the author states that '*staff-pupil interactions in the class as a whole may have been positively influenced by the intervention, even though the majority of children did not participate in a Communiplay trio*'.

10 elements were seen by staff as relevant to the quality of pupils' interactivity. These were:

1. An expectation of peer conversation
2. Staff being approachable and interested
3. A relaxed pace to arriving in class
4. Staff deliberately giving attention to focus pupils
5. Staff sitting at the child's level and children interacting while standing
6. Pupils having freedom to choose from a range of activities
7. Mutual laughter
8. Informal physical contact conveying connection
9. Extended interactions
10. Staff being available to relate, rather than being busy with tasks.

The study also found that most staff were comfortable doing Communiplay in the classroom, although some did find the practice uncomfortable. However, the staff also found it impractical to fit 3 sessions of Communiplay into their daily schedules, and that the single training session on I.I. proved insufficient to achieve consistency of practice. The difficulty teachers had fitting Communiplay into the timetable apparently indicated an unwillingness to prioritise it over other, more instructional, teaching tasks.

In conclusion: despite a number of acknowledged limitations to this study, the findings confirm the difficultly a class teacher, under pressure to deliver the National Curriculum, has in making I.I. available in a mainstream classroom. According to the author, radical shifts are needed in staff preparedness, deployment and practice. Also a more individualised application of the National Curriculum is necessary to enable pupils with autism to develop their socio-communicative abilities.

The value of this study is in documenting the use of Intensive Interaction within mainstream classrooms. This intervention created intrinsically motivating and inclusive learning environments that contributed to the social development and well-being of children with autism and their peers with SEN. In terms of inclusion, creating communication enabling classrooms that focus on the responsiveness of staff is likely to yield the most benefits.

Part B: Research with Adult Participants

Efficacy of Intensive Interaction: Developing sociability and communication in people with severe and complex learning difficulties using an approach based on caregiver- infant interaction

Nind, M. (1996) *European Journal of Special Educational Needs*, 11 (1), 48-66.

The Participants: This research was carried out with six students who were resident at a long stay hospital and part time students at the hospital school. After a '*base-line phase*' of up to 6 months, daily Intensive Interaction was introduced in an intervention phase of between 12 and 18 months. Measurement of the students' behaviour was done using specially constructed observation schedules and video analysis, with Kieran & Reid's *Pre-Verbal Communication Schedule* and Brazelton's *Cuddliness Scale* also used.

The Results: There was a greater frequency of initiation of social contact, or initiation of social contact as a new phenomenon for all six students. There was also an increase in responses to proximity or physical contact in all the students, such as '*looking at the teachers face*' (3 students); '*making eye contact*' (2 students); and '*happy vocalisations*' (2 students). '*Smiling in a response to a teacher*' also increased for all the students.

Each student developed some new interactive behaviour, and these included '*looking at the teacher's face*'; '*contingent smiling*'; '*nestling into the teacher*'; '*exploring the teacher's face with hands*'; '*maintaining a state of joint focus*'; '*contingent vocalisation*', and '*taking the hand of the teacher*'.

All of the students made advances in their communication abilities measured on the *Pre-Verbal Communication Schedule,* with progress particularly evident in the areas of vocal imitation, communication through gesture, and through the use of sounds. All the students made advances in their reciprocation of warm physical contact as measured by the *Cuddliness Scale*. Also the incidence of ritualistic behaviours or '*organised self-involvement*' decreased for four students.

Additionally it was noted that two students who had never been able to make eye contact before, began to do so. Also, two students whose whole behavioural repertoire had been dominated by ritualistic self-involved behaviours, paused from this in order to engage in interactive games. One student changed from being a person no one could relate to, to someone with whom all the staff enjoyed interactive games. Another student who was described as '*mostly sleepy and unmotivated, became alert and responsive, vocalising and waving her arms with the excitement of an interactive game*'.

The Conclusions Drawn: The conclusions of this research were that after Intensive Interaction was introduced, the six students made observable gains in terms of their social and communication abilities, with new interactive behaviours emerging as ritualistic behaviours decreased. It was also shown that there were no significant events concurrent with the onset of Intensive Interaction, and therefore no rival explanations for the developments being caused by anything other than the use of Intensive Interaction.

The Effect of Intensive Interaction on the Sociability of a Man with Severe Intellectual Disabilities

Lovell, D., Jones, S. & Ephraim, G. (1998) *Int. Journal of Practical Approaches to Disability,* 22 (2/3), 3-8.

The Participant: This research was conducted to investigate whether a withdrawn, 53-year-old pre-verbal man (W.) with severe intellectual disabilities showed an increase in sociable behaviour in two differing conditions. In one, a clinical psychologist engaged in Intensive Interaction with the client; in the second, the same psychologist remained close to the client but did not interact with him (‘*proximity sessions*’). The research was conducted in a long stay hospital for people with severe/profound intellectual disabilities.

The Results: before the interventions, the client (W.) would hum to himself and sing without words. He spent most of his time sitting alone in a corner and did not initiate any physical contact. However, there was much more physical contact in the Intensive Interaction sessions, and in one session he squeezed the psychologist's hands as part of a game for 90% of the time. He also did make physical contact on a number of occasions during the proximity sessions. Before the interventions W. spent no more than 10% of any session looking at another person - in some proximity sessions there was an increased occurrence in looking behaviour; however, during the Intensive Interaction sessions more than 10% of every session was spent looking at somebody, and over 70% on two occasions.

During the course of the intervention, vocalisation (humming or wordless singing) appeared to increase in both the Intensive Interaction and the proximity sessions over the levels recorded previously. Also no episodes of joint attention were recorded prior to the interventions. There was one recorded instance of joint attention in the proximity sessions. Episodes of joint attention were, however, observed during the Intensive Interaction sessions, recording over 70% on two occasions. No smiling or laughing was recorded prior to the interventions. However, W. was noticed to smile and laugh during two proximity sessions, and more often during Intensive Interaction sessions.

W.'s tendency to look at a toy in his hand remained relatively stable prior to, and over the period including both the proximity sessions and the Intensive Interaction sessions. W. covered his face with his clothes for 25 to 50% of the time prior to the interventions. This behaviour was only briefly evident on one of the 17 intervention sessions (during a proximity session). There were no occurrences in the Intensive Interaction sessions.

Some Discussion: the results of this research indicated that during the Intensive Interaction sessions W. tended to initiate more physical contact; spend more time looking at people; demonstrate more joint attention, and smile/laugh and vocalise more than he did prior to the interventions. He showed no examples of covering his face during the Intensive Interaction sessions, although this had been a frequent behaviour previously. The increase in sociability appeared to generalise to the proximity sessions, although the changes were significantly less marked than during Intensive Interaction.

The nursing staff who regularly worked with W. also commented that during the interaction period W. appeared happier and more willing to interact than he had been before. His increased sociability also seemed to generalise from the Intensive Interaction setting to other contexts.

Reducing Stereotyped Behaviour: an experimental analysis of Intensive Interaction

Jones, R. & Williams, H. (1998) *International Journal of Practical Approaches to Disability*, 22, (2/3), 21-25.

This research study investigated the effects of an Intensive Interaction intervention in comparison to the effects of a proximity-only intervention. The focus of the study was on the decrease of stereotyped behaviour as opposed to any effects on social behaviour.

Stereotyped behaviour, such as body rocking, hand gazing and head swaying, is frequently reported in people with severe and profound learning disabilities. Previous studies demonstrated that naturally occurring interactions with staff could reduce stereotyped behaviour (Brusca *et al*, 1989; Lovell *et al* 1998; Ephraim, 1982).

The Participant: The participant, Larry, was a 35-year-old man with a severe intellectual disability. He lived in a residential hospital setting, did not use expressive language and had limited eyesight. Larry's stereotyped behaviour consisted of flapping both of his hands at high frequency.

Method & Findings: The researchers conducted two single subject experiments.

The first experiment used a proximity-only treatment in order to compare the Intensive Interaction intervention with the effects of an alternative intervention. Larry was observed in his normal environment during a baseline period in order to gain evidence on the normal levels of incidence of his stereotyped behaviour. At the intervention phase staff were asked to sit near Larry (i.e. proximity-only sessions) or sit near him and imitate his left hand stereotyped behaviour (i.e. Intensive Interaction). The results of this experiment suggested that Larry's stereotyped behaviour was '*consistently slightly lower in the interaction conditions*' than in the proximity only sessions (and when compared to his baseline behaviour).

In the second experiment again a member of staff sat near Larry, or sat near and copied his hand flapping with both his hands. From this experiment, it appeared that '*interaction had a reductive effect*' on Larry's hand-flapping when compared to both his baseline behaviour, and when engaged in the proximity only sessions.

Some Discussion: Overall, despite the positive and seemingly supportive evidence listed above, the effects were small and so not viewed by the authors as unambiguously demonstrating that Intensive Interaction is an effective intervention for reducing stereotypic behaviour. However, the authors stress that stereotyped behaviour is very difficult to reduce, and many other studies have also been unable to provide evidence of effective reduction whilst using a variety of other interventions.

Enhanced Interaction Training

Cameron, L. & Bell, D. (2001) *Working with People who have a Learning Disability*, 18 (3), 8-15.

This article focused on a multidisciplinary intervention to introduce staff to Intensive Interaction and support them in using it with their own clients.

An Introduction: It has been estimated that 50% of people with learning disabilities have significant communication problems (*Scottish Executive Review of Services*, 2000). However, the diagnosis of a communication problem often masks the other (i.e. the learning disability), and staff working with learning disabled people are typically poor at communicating within their client's level of understanding (Bradshaw, 2001). It is suggested by Bott *et al* (1997) that a person's level of communication difficulties is also highly related to the frequency of their challenging behaviour.

The Initial Clinical Approach: A young man with a severe communication disorder, severe learning disability and serious challenging behaviour was referred to the authors. He communicated only through vocalisations and a few repetitive words. The authors observed and assessed the client in his normal environment and found staff to be over-estimating his level of verbal comprehension and also the level of intent behind his actions. His attempts to communicate non-verbally were not being observed or responded to. The authors designed a programme aimed at improving staff observation and non-verbal communication. They used sensory objects to promote Intensive Interaction with the client.

The Intensive Interaction sessions resulted in increased eye contact, increased initiation of communication, more frequent vocalisations, and repetitive words said with a more communicative context. There was no challenging behaviour within the sessions. The staff, however, did not accept the progress. They were happy that the client could now express pleasure through clapping, but thought that it would be seen negatively in public. The authors felt that in order for this approach to be clinically effective it would require further commitment from staff.

The Revised Clinical Approach: It was decided that the carer attitude to the client, to the possibility of progress, and to the demands that would result from changing the client's communicative behaviour would need to be addressed. The authors then saw a non-verbal young woman with self-injurious behaviour. There were six sessions of Intensive Interaction in the client's home where one author would interact with the client whilst the staff member watched. These sessions were video-recorded and reviewed. The staff member then gradually took over the interactive role.

The Results: Due to the Intensive Interaction intervention, the client made significant communicative changes and the staff member showed an improved ability to match their communication to the client. The improvements included increased responsiveness to non-verbal cues, reduced use of verbal language and an increase in the time given for a response. These gains lasted for over a year.

Intensive Interaction with a Woman with Multiple and Profound Disabilities: a case study

Elgie, S. & Maguire, N. (2001) *Tizard Learning Disability Review,* 6 (3), 18-24.

The Participant: This study reports on the use of Intensive Interaction with a remote and withdrawn 39-year-old woman, Anna, who engaged in serious self-injurious behaviour (SIB). Anna was a blind woman with profound learning disabilities who had lived all her life within the care system. She was '*extremely emotionally and socially isolated*' and had '*effectively cut herself off from the outside world*'. She was reported as having no verbal skills and '*used very limited non-verbal communication*'.

Anna had engaged in serious self-injurious behaviour since childhood '*to the extent that her face and eyes had become extremely disfigured*'. To protect her from damaging her face and eyes further she wore plastic arm splints for 25 minutes in every hour.

Prior to the intervention, baseline measures of Anna's self-injurious behaviours were collated for six months prior to the start of Intensive Interaction. When Anna's splints were removed she immediately started to self-injure, by eye gouging or pressing her fingers under her collarbone. During the intervention Anna was seen three times a week in her room for 16 weeks by both therapists (a psychologist and an assistant psychologist, named as the authors above), and this was carried out whilst her arms were splinted. The sessions of Intensive Interaction contained physical contact (esp. hand holding), vocal commentary with intonation and sensitively timed vocal imitation. These sessions lasted up to 25 minutes.

The Results: There was '*an obvious increase in the amount of hand contact*' spontaneous initiated by Anna after the Intensive Interaction began. This was in contrast to her behaviour prior to the Intensive Interaction intervention when no spontaneous reaching out by Anna had been observed, despite the fact that Anna had been receiving the same amount of individual time with a therapist in the six months before the intervention (when the first author was unsuccessfully attempting to engage her in a behavioural program involving reward and tactile stimulation). This new behaviour was seen to be '*an exciting and striking response to Intensive Interaction'*.

The results also showed that Anna made more vocalisations during the Intensive Interaction sessions than when she was alone. According to the authors, '*the decrease in vocalisation when Anna was alone suggests that Anna's noises were attempts to communicate with and respond to the therapists' interactions in a dialogue type fashion*'.

However, also included in the findings was the assertion that '*there was no appreciable change*' in the presentation of the Anna's SIB (self-injurious behaviour) over time; this was indicated by the authors as being '*expected at this early stage of intervention, given that she had used self-injurious forms of stimulation for most of her life'*.

Some Discussion: Generally, the authors concluded that this study provided further evidence of the effectiveness of Intensive Interaction in '*the development of social and communicative skills*'.

From the inside looking out [FILO] – an Intensive Interaction group for people with profound and multiple learning disabilities

Leaning, B. & Watson T. (2006) *British Journal of Learning Disabilities*, 34, 103-109.

This paper reported on a series of workshops in an adult learning disability day centre for groups of clients and carers. Intensive Interaction was used with five people with profound and multiple learning disabilities over 8 weeks, with the aims of developing: *meaningful dialogue; the ability to relate and communicate with others; an awareness of themselves as separate; alternatives to self-stimulatory behaviour.*

Method: The participants with profound and multiple learning difficulties (3 female and 2 male) were videoed for 50 minutes prior to the sessions as a baseline measure. All the participants were preverbal, all had very limited non-verbal communication, and all were said to avoid interaction. The video was analysed, using momentary time sampling techniques, to observe behaviours that were viewed as being important for either interaction or for avoidance of interaction, and 5 such behaviours were described: eye contact with others, object-orientated eye contact, self-stimulation (e.g. rocking, breath holding, face slapping), smiling and active avoidant behaviour (moving or turning away from others, covering the face to block the view of others).

After the assessment phase the group was run for eight weekly 50-minute sessions with two facilitators (a Music Therapist and a Clinical Psychologist). Each session began and ended with 5 minutes of music to signify a transition in and out of the session. A box was placed in the middle of the room that contained a variety of sensory items (e.g. balls, silk materials, musical chimes) which were used in interactions. In each session each facilitator would engage with clients who indicated their wish, or readiness, to do so, often building a game from an action, facial expression or sound made by the client.

Each session was videotaped and each of the five behaviours measured for each individual. One follow-up session was conducted one month after the end of the last group. A researcher who was not involved in the group conducted all the video ratings and analysis. In both the baseline and follow-up sessions the participants were engaged in the group sessions with the members of staff from the day service. Four different types of groups were observed to measure the baseline and follow-up (music and movement, massage, communication, and news and views).

Results: Across the group there was an increased use of eye contact, to others and to objects, suggesting that the participants developed a greater interest in interacting than they had demonstrated during baseline or follow-up phases. An increased incidence in smiling throughout the group also pointed towards a higher level of enjoyment during interaction than at baseline or follow-up. A reduction in both self stimulation and active avoidant behaviours suggested that the participants felt more comfortable interacting during these group sessions, and it was suggested that the facilitators were better able to build greater understanding of the participants. However, when the data was analysed from the follow-up session (one month after the final session), the frequency of behaviours shown by the participants reverted back to a rate similar to that of the baseline. This appears to indicate that the mechanisms learnt in the group were not, at that time, generalised to other areas of the participant's lives.

Discussion: Through the analysis of the changes in positive and negative behaviours, this study suggests that there was an increase in the ability of all the participants to engage with the facilitators. Therefore, they concluded that this study supports the idea of **FILO** and the use of Intensive Interaction principles in working with people with profound intellectual disabilities.

It was the author's belief that Intensive Interaction principles can be taught to staff (over a three to four session training course, with ongoing supervision), and that such training supports the government policy aim '*to ensure that social and health care staff working with people with learning disabilities are appropriately skilled, trained and qualified*' (DoH 2001, p.26).

'Using Intensive Interaction - A case study'

by Forster, S. & Taylor, M. (2006) *Acquiring Knowledge in Speech, Language & Hearing,* 8 (1), 12-15.

This study focused on Cameron, a young man with a profound intellectual disability, severe vision impairment and a physical disability, who attended a small day service five days a week. The study was conducted over 6 months with 9 DSWs participating, two being interviewed regarding their reflections on the intervention.

Design: Data were gathered both retrospectively and prospectively. Multiple sources of data (reports, assessments, observation, reflections by participants, and interviews) were collated to compare to the pre-intervention data. 50 interaction reflection forms were completed by DSWs immediately following an I.I. session. Follow-up data included a re-administered Triple C (completed by the service speech pathologist with two DSWs), videoed observations of interactions with Cameron, and two semi-structured interviews with DSWs (which were transcribed, and thematically analysed and coded).

Results: In 2002 (before the I.I. intervention), Cameron's communication was assessed as consistent with the pre-intentional reflexive communication stage (stage 1 - Bloomberg & West, 1999), with some skills in the reactive stage. This indicated that Cameron was showing minimal reactions to people, activities and objects, and his responses were mainly reflexive. Cameron also showed very few person engagements, a few engagements with objects (e.g. sucking objects) and was largely involved in self-engagement behaviours.

In mid 2004, the service received a consultation on Intensive Interaction, and the manager of the service and the service speech pathologist supported the establishment of daily interaction sessions for Cameron. These one-to-one sessions varied from 15 minutes to 2 hours (occasionally occurring twice a day) and following the interaction, staff completed the interaction reflection forms. A content analysis was completed on the 50 reflection sheets, with the following findings being of particular note:

- There was a change in the interactions occurring separate from other clients, to interactions occurring in the same rooms as other clients, often on the periphery of established programs like art or music;
- New skills were recorded e.g. increased eye contact, searching for his interaction partner's hand;
- There was a shift from negative ascription of behaviour to seeing the behaviour as communicating a need, and problem solving to address that need,
- Some staff reported using the same techniques continuously, whereas other staff reported trying out new techniques to extend the interactions.

Six months later the Triple C was re-administered and Cameron's recorded skills had increased to being consistent with the pre-intentional reactive stage of communication (stage 2). Behaviours observed in 2005, but not in 2002 included smiling, reacting to the voices of particular staff and beginning to show anticipation – although it was noted that any new observations might have indicated that Cameron's communication skills had improved, and/or that his DSW's were more observant of his interactive behaviours.

The two DWSs interviewed were also video recorded in 5 minutes of Intensive Interaction with Cameron. The videos were reviewed and written observations made (i.e. video interactions were not coded, but used to provide general descriptions of behaviours). The observations showed that the DWSs showed positive regard towards Cameron through their words to him and their physical positioning (e.g. sitting with their face close and body oriented towards Cameron). They used techniques such as burst-pause, whereby they would rock or pat Cameron and then pause to see his response, and they imitated Cameron's sounds to capture his interest. They also just sat with their hand on his chest or legs, making small movements to signal their presence.

The results of the Triple C and reflections by staff utilising Intensive interaction indicated that improvements in individuals' communication skills and positive staff perceptions were seen in this case study. The staff reported positively on the use of Intensive Interaction, though challenges of gaining resources for staff availability and ongoing training were acknowledged.

Conclusions: The analysis of the data gathered suggests that improvements did occur both in Cameron's communication skills, and in the perceptions of staff following the intervention. The promising results of this case study indicate the potential usefulness of Intensive Interaction for people with PID. Also indicated was the need for more rigorous research to demonstrate the efficacy of using Intensive Interaction as a means of increasing communication interactions between with adults who have PID and their significant communication partners.

Intensive Interaction as a Novel Approach in Social Care: Care staff's views on the practice change process

Firth, G., Elford, H., Leeming, C. & Crabbe, M. (2008) *Journal of Applied Research in Intellectual Disabilities*, 21, 58–69

This study relates to an intervention in 4 NHS staffed group homes in the north of England. 29 staff members were trained in the use of Intensive Interaction (II) and subsequently supported in implementing the approach with their clients over a 6-month period. Data was collected via researcher field-notes and semi-structured interviews, the data then being analysed using a grounded theory approach (Charmaz, 2003). During analysis the data was categorised into 7 major thematic headings, and the data illuminated a number of potential conceptual, philosophical and practical issues that appeared to influence staff's adoption of Intensive Interaction.

1. Levels of client responses attributed to II: Client responses to II ranged from the clearly beneficial and novel, to there being little or no response. The novel responses ranged from improved awareness of the social environment, to non-task associated physical contact. It also emerged that client responses were crucial, with staff using 'feedback' to decide whether or not to continue, and successful interactions made staff interact more with certain clients.

2. Staff's conceptualisation of II and its potential outcomes: a range of conceptualisations of II emerged, with some staff seeing II as: a form of communication; relationship building; client led activity. The most common view was that II was a means of communicating with clients through their own communicative means and at their level.

3. Staff's view of client's communicative means, personal attributes, and level of understanding: Staff's views of their clients' personal attributes also influenced the II used. This was at times a barrier as some staff were deterministic about their client's behaviour, or thought that clients might not like it: but this wasn't always the case, and some staff's views changed: *'[the staff] have seen clients do things that they didn't think they would'*.

4. Issues related to staff - client relationships: it was noted by some staff that staff-client relationships varied which potentially affected the levels of social interaction. II was seen as a potential tool to build relationships with clients.

5. Philosophical issues influencing the care environment: some staff voiced concerns about II being based on 'infant-caregiver' activity and felt that 'age-appropriate' methods should be favoured. Some staff also had concerns about how using II 'in public' might look to outside observers.

6. Practical, personal and temporal issues affecting the use of II: there were some aspects of II that staff used more often, whilst there were some techniques which some staff were unsure about using due to a number of reasons. Also time related issues emerged; one being that II was competing with other tasks for finite staff time.

7. Issues related to the momentum of approach adoption: the study data indicated that, over time, there was an apparent decline in the level of interest and involvement in II.: *'Its fallen down the wayside a bit, not through any other reason than ... you're cooking, cleaning, shopping'* [quote from a home manager]. There were a variety of practical suggestions given about how to support the continued use of the approach in the longer term e.g. by making II part of induction training, improved staffing levels and a II facilitator to support staff.

Discussion: Although during the research there were clear benefits of II, there still appeared to be a number of philosophical, practical and organisational barriers. Overall this research found varying levels of acceptance by staff of the practice changes required to fully implement II. In response to II the study reported: some clients evidenced greater frequency of initiation of social contact, improved sociability, client led interactions and increased client involvement. The research also found evidence of improved attempts at building relationships, with this emerging as an important potential outcome of the approach. This outcome also was noted to correspond with previous research where II enabled 'confidence and trust' to be built, with staff seeing Intensive Interaction as useful in improving relationships with clients, even when they had previously worked together. However, some staff felt they were already doing II, but this research suggests that some such claims could potentially be exaggerated. Also the issue of 'age appropriateness' was still identified as an obstacle to using II, with some staff feeling it could potentially damage their clients' image in public.

Another issue identified in this research was an apparent decline in II use over time, or 'initiative decay' as described by Buchanan et al (1999), with such decay happening as the 'novelty fades' during a practice change intervention. It was suggested that future Intensive Interaction interventions should take 'initiative decay' into account. Also it was posited that future research should look at organisational structures to support Intensive Interaction adoption, with Golembiewski's (1976) hierarchical order of organisational change being used as potentially a more reliable framework for sustained approach adoption.

Finally the paper noted that ***'Valuing People'*** (DoH, 2001) states that an objective for learning disability services is to enable people to develop *'a range of activities including leisure, interests, friendships and relationships'* (p7), and it is the authors' contention that a more effective and sustained adoption of Intensive Interaction could significantly enable such aims to become a reality, particularly for clients with profound and multiple learning disabilities.

An evaluation of Intensive Interaction in community living settings for adults with profound intellectual disabilities

Samuel, J., Nind, M., Volans, A. & Scriven, I. (2008) *Journal of Intellectual Disabilities*, 12 (2), 111-126.

This research took place in a service for adults with profound intellectual disabilities where Intensive Interaction (I.I.) was an emerging practice. The study looked at two hypotheses: 1. That support staff as novice practitioners could learn the principles of Intensive Interaction, and 2. That novel use of I.I. would have a positive impact on, (a) the communication and social abilities of people with profound learning disabilities and, (b) the quality of relationship between them. A '*time-series multiple-baseline*' design was used, and three features were measured: (i) if novice practitioners could learn the principles of intensive interaction, (ii) the impact on communication and social abilities of the participants, and (iii) the impact of the quality of relationship between the practitioner and participant.

The Participants & Measures: Four participants took part in this research, Alice (32), Betty (56), Clare (46) and Diana (23). The research took place in four different bungalows with distinct support teams. The participants had no previous involvement of intensive interaction. The staff comprised three 'practitioners' and three observers per participant. An assistant psychologist visited weekly and filmed the interaction (and acted as an additional practitioner). The I.I. training given to staff comprised a ½ day workshop, service guidelines, reflection recording forms and a support group. The Intervention comprised of 5 sessions of I.I. per week (100 sessions in all).

The Results: During the study fewer than 100 sessions of I.I. were actually recorded (although practitioners did indicate that there were more sessions, and the historical logs revealed that there was ill-health for all of the participants which caused reduced filming). The I.I. sessions for the 4 participants ranged from 3 to 60 minutes.

Hypothesis 1: Video data showed that the staff practitioners learned to use mirroring of movements and vocalisation and contingent responding more. It was however noted that the frequency and extent of reflection records completion declined over time, and that the analysis showed evidence of the use of the principles of Intensive Interaction, but not of any progression. Only ½ the staff practitioners attended a support group, and they were reluctant to watch their own videos, reducing the potential for reflective practice.

Hypothesis 2(a): Each of the participants developed differently, but there was early evidence of the impact of the intervention on 'looking behaviours', although for Alice this began before the study. The ability to become 'socially engaged' and to do 'joint-focus' activity became apparent later on. Also the development of initiation of 'social/physical contact' was noted as patchy. For 'positive interaction' all of the participants showed improvements by the end of the intervention, whilst for Alice & Diana, 'vocal imitation' was also improved, and Clare showed improvements in 'attention seeking', 'simple negation' and 'understanding non-vocal communication'. The Interactive Sequence showed improvements for Betty and Clare (rated by practitioners) and for Diana (rated by observes), and reflection records reported 'eye contact' throughout for all the participants and, with the exception of Diana, frequent smiling. The staff questionnaires indicated an increased expectation amongst staff that I.I. would enhance skills of participants and would gradually lead to success and maintained progress.

Hypothesis 2(b): The code applied to most practitioner data in the staff questionnaires was 'team cohesion', whereas 'benefits for staff (in general)' was applied most to observer data. The code 'reciprocal relationship building (with participant)' fitted only 3 of 58 practitioners and the same amount in the observer comments. Practitioners also made some comments that were coded as 'reciprocal relationship building', although the observers made none. At the end of the study one practitioner commented that 'we have learned to read each other', and it was also noted that Betty twice sought interaction with a practitioner, when previously she would sit alone on sofas and never seek out the company of others. Overall, I.I. was generally rated as 'positive' for both participants and practitioners.

Discussion & Conclusions: The findings of this study add to the I.I. evidence base, furthering knowledge about I.I. but also raising some issues. Service demands which compete with I.I. may need to be addressed and better planning and supervision may have made more impact in this study. The record keeping was sparse, and more specificity in recording formats may help to prompt practitioners to use the I.I. principles they overlook.

The findings of this study complement the existing evidence about the development of communication and sociability for people with profound intellectual disabilities through Intensive Interaction. Use of I.I. in Supported Living by novice practitioners appears to offer some potential, both for staff to learn some of the principles of the approach and for the impact this might have on the communication and social abilities of the clients and their relationship with them.

How Rapidly Does Intensive Interaction Promote Social Engagement for Adults with Profound Learning Disabilities?

Zeedyk, S, Caldwell, P. & Davies, C. (2009) *European Journal of Special Needs Education*, 24 (2), 119-137.

This study investigates levels of engagement in individuals with profound learning disabilities (PLD) participating in their *first* Intensive Interaction session. The authors had two specific aims: to determine how quickly observable increases in engagement behaviours take place, and to investigate individual differences in patterns of change across the sample.

Participants: Ten non-linguistic individuals with profound learning disabilities took part (6 female, 4 male, aged late teens to early 60s). No formal diagnoses were available; however, informal reports from staff indicate diagnoses of autism, cerebral palsy and global intellectual delay were likely.

Method: The authors used an observational, multiple-case design to investigate levels of social engagement in clients participating in their first Intensive Interaction session. Videotaped material, randomly selected from an archive owned by Phoebe Caldwell, was analysed using micro-analytic techniques.

The Intensive Interaction sessions in question took place in residential or day centres and lasted between 30 minutes and several hours, however, the present analysis focused on the initial section of the interactions: coding commenced when the session began and ceased when the first break in interaction occurred. Consequently, analysed sessions ranged from approximately 3 to 14 minutes.

Coding aimed to record three key behavioural indicators of clients' interest in their interaction partner:

- *eye gaze to partner* ([a] away from partner, [b] toward partner's body, [c] toward partner's face);
- *bodily orientation to partner* ([a] away from partner, [b] toward partner, [c] facing partner directly); and,
- *proximity to partner* ([a] far/beyond touching distance, [b] close/within touching distance, [c] touching).

The *emotional valence* of client's actions was also coded as either: (a) neutral/negative; (b) positive; or (c) very positive. Inter-rater reliability of coding was assessed by having a second coder, who was blind to the hypothesis, code 20% of the footage. The mean intra-class correlation between the two raters was 0.89, indicating acceptable levels of reliability.

Findings: Data analysis began by dividing the interaction sessions into four equal quarters. Next, an 'Engagement Index Score' (EIS) was calculated for each of the three key social behaviours to represent the extent to which a participant was socially engaged in that quarter of the session. The EIS scores ranged from 0 to 100, with a score of '0' indicating that the participant had spent the entire quarter of the session at the lowest level of engagement for that behaviour (e.g. for *eye gaze to partner*, '0' would mean eye gaze was oriented away from the partner for the whole quarter) and a score of '100', meaning that the participant was constantly at the highest level of engagement (e.g. for eye gaze to partner, '100' would mean that the participant looked only towards their partner's face in that quarter).

Comparisons were made between the EIS for segment one and segment four of the Intensive Interaction sessions to determine how many participants showed an increase in engagement over the session. It was found that index scores generally increased from section one to section four. Nine out of ten participants showed increased eye gaze, eight out of nine showed an increase in proximity to partner, and six out of eight displayed an increase in orientation to their partner. Emotional valence also increased in 9 out of ten participants. A non-parametric Fisher-Exact probability analysis was used to determine the probability that these increases in engagement occurred by chance. All tests were significant at the 0.005 level, indicating that the increases in engagement can be attributed to the intervention and that Intensive Interaction had an effect on all four of the behaviours measured.

A separate analysis was used to investigate the patterns of change for each participant in more detail. Engagement Index Scores were depicted graphically for each participant and each quarter of the Intensive Interaction session, revealing that the overall pattern of increasing engagement was subject to considerable variation. There was large variation in both the degree by which engagement increased between quarters and in the trajectory of change (i.e. linear vs. fluctuating increases). The secondary analysis demonstrated that all participants showed increases in at least some measures and that the majority (7/10) showed increases for all four measures.

Discussion: This study has shown that Intensive Interaction is an effective tool in promoting social engagement with key social behaviours showing increases in the first Intensive Interaction session**.** In order to investigate if the recorded increases in sociability were a product of Intensive Interaction *per se* or whether they would result from any form of attentive social interaction, future research must employ a design that compares Intensive Interaction with other forms of intervention, as well as with standard, non-intervention interactions. The authors also relate their findings to the existing literature, suggesting that further work may be done to investigate exactly what conditions are necessary for improvements in engagement and why Intensive Interaction seems to be particularly useful in creating these conditions.

Can adults on the autism spectrum be affected positively by the use of intensive interaction in supported living services?

Fraser, C. (2011) *Good Autism Practice*, 12 (2), 37-42.

In this paper the author CF (a residential service manager) stated that people who cannot communicate verbally are often not communicated with effectively, and this was why she was interested in Intensive Interaction (I.I.).

The case study: Derek was a man of 67 years with a diagnosis of autism and epilepsy. He had lived in the same supported living setting for 9 years. Derek sometimes displayed behaviours that were challenging e.g. incontinence; screaming and shouting at others; repetitiveness; withdrawing to his room for long periods; switching lights on and off; pulling his finger nails off. These behaviours were described as 'agitated behaviour'. In order to judge the effectiveness of I.I., CF decided to record the frequency of these behaviours during and after the intervention.

When at home Derek had 1-to-1 support, and also attended a day centre five days a week. He communicated using words (singly or as a short 'string'), gestures, and by pointing. When using I.I. with Derek, CF decided to work 'instinctively', only using speech when she deemed it to 'fit'. One of the common interactions initiated by Derek was to talk about colours: **Derek:** "*Colour*" (pointing to a gold button) … **CF:** "*Gold*" … **Derek**: "*Gold colour*" … CF**:** "*Gold colour*" … **Derek:** "*Nice colour Ha Ha*" (laughing) … **CF**: "*Nice gold colour*"

Derek appeared to respond positively to this interaction (he laughed, smiled and used eye contact), but this would not have happened prior to the introduction of I.I.. His support team tended to talk to him using full sentences as illustrated here: **Derek:** "*Colour*?" (pointing to some flowers) … **Support Worker:** "*The flowers are yellow, where did you get them from*?" … **Derek:** "*Yellow*" … Support **Worker:** "*I asked you where you got them from Derek*" … Derek did not respond and sat quietly.

Aims: CF's stated aim of the I.I. was to develop more individual conversations rather than a prescriptive list of how to react. From observation Derek's common movements and sounds were identified, giving an indication of what he might recognise.

Results and evaluation: When first using I.I. CF felt that Derek wasn't showing any interest in her, preferring to seek out his support worker. After a few sessions the first shared interaction was a sigh, with a loud 'blowing out' sound. Derek did this and CF echoed it, and then Derek gave a very brief sideways glance towards CF. As the sessions went on, this interaction built up until one day as CF arrived Derek immediately sighed: it felt like they now had a meaningful way to say "Hello".

During session 3 Derek used CF's name. When CF arrived for session 5, Derek's support worker took her to his room (where he was watching TV) and said: "*Derek, Catherine is here*", at which point Derek said "*Catherine*" and smiled and jumped up from his bed. During session 8 Derek used sustained eye contact for the first time. CF found these signs of progression exhilarating and encouraging, to her it was a sign that the I.I. sessions were having a positive effect on Derek.

To increase the reliability of the findings CF met with Derek's support team and asked them for their observations. One comment was that Derek had started asking when CF would next come. Other changes agreed by the team members were:

- Derek had started spending more time in the lounge than his bedroom.
- Derek had started interacting more with his fellow service-users.
- Derek was more likely to complete activities with his support worker, and had stopped flicking lights on and off.
- The amount of time Derek spent listening to music through headphones had reduced.
- Derek appeared more patient, and did not invade other people's personal space as much as he did before.

Generally the observations from the staff team showed an increase in sociability and a decrease in behaviours that challenged (see Table 1: the frequency of Derek's challenging behaviours decreased post-I.I.).

Table 1: Frequency with which behaviours were observed by staff over a five moth period

Behaviour displayed	Frequency per month					
	Feb.	March	April	May	June	July
Incontinence	12	14	12	8	6	0
Repetitive behaviour	20	21	15	12	12	11
Agitated behaviour	4	4	2	0	0	1

Concluding comments: When evaluating this study CF stated that a research should consider any other factors which may have affected Derek's behaviour, but then noted that there were no changes in the level of Derek's support, or in the number of family visits and no significant changes to his health. CF also noted that there was no control or comparison data, making it impossible to conclude that the changes were directly due to the I.I., but CF states that this might well have been the case, and that there was no evidence to suggest that the I.I. caused any regression in his emotional state or behaviour.

Intensive Interaction: to build fulfilling relationships

Harris, C. & Wolverson, E. (2014) *Journal of Dementia Care*, 22 (6), 27-30.

In this paper the authors share their experiences of using Intensive Interaction (I.I.) to support people living in the later stages of dementia.

Communication in dementia: The authors point out that dementia care experts have warned that people with dementia who no longer have speech are at risk of becoming socially isolated and disempowered. For families and staff, the breakdown in communication can be a significant source of stress in care giving. There is growing recognition of the importance of reciprocity in dementia care, and I.I. could potentially be a means to this end.

The authors muted that some people may question I.I. for people with dementia given its origins in parent-child interactions. Also there are concerns that I.I. will not lead to cumulative improvements over time, due to the progressive nature of dementia. Despite such concerns, as I.I. focuses on social inclusion and emotional connectedness through meeting a person at their current level and allowing them to lead the interaction, this makes I.I. an approach that could offer structure and support to communication in advanced dementia.

The authors' experience of using I.I.: For EW [a clinical psychologist] I.I. is especially useful when working with people who present with challenging behaviours – a sign that needs are unmet, often due to a communication breakdown. CH [a SLT] first used I.I. when working with adults with learning disabilities, but when she began working with people with dementia, she soon realised that their communication needs tended to be neglected, and so she continued to use I.I. whenever she thinks it appropriate.

CH researched the use I.I. with people with dementia: for the three participants in CH's research, she found a sense of relationship development over the week of the study, and also in the following weeks. Two of the participants in particular also showed signs of engagement and social interaction, such as 'looking at carer', 'vocalising', 'initiating', 'smiling / laughing', which were more prominent in the I.I. session than in the standard interaction.

For one participant Mr D (who was bed-bound) I.I. gave him an opportunity to initiate interactions to control another person's social behaviour e.g. moving his hand to his ear as CH sang. Mr D also started to change his vocalisations: outside of the I.I. sessions he vocalised loudly and constantly (it almost sounding painful), but shortly into the first I.I. session he began to adapt his vocalisations so that were gentler (mirroring CH's sound): it felt like the give and take of a true conversation and led to a feeling of profound connection: basically, I.I. enabled Mr D to demonstrate areas of retained function which had been overlooked when relying on verbal interaction.

Mrs K flinched at touch and was isolated through her constant walking. She allowed the CH to join her on her stroll. During sessions there were shared moments of laughter and game playing as Mrs K showed CH her favoured routes and routines. As the sessions progressed Mrs K allowed CH to gently touch her arm, and this eventually developed, much to the shock of observing staff, into twirling each other's hair while she watched CH intently. Perhaps most important of all was Mrs K's husband's comment that for the first time in months she had made eye contact with him.

The study was small and exploratory, but the results suggest great potential for the use of I.I. with people with dementia and the impact it can have on their relationships and well-being.

Reflections on teaching I.I. to staff groups: In many ways I.I. training for staff has been about permission giving and encouragement and as such appears to have positive effects on self-esteem. Also as I.I. can be emotionally and physically demanding so ongoing supervision and support is also essential. Training and supervision take time and I.I. also requires time and patience, so ultimately a culture change in services is required where services can move away from models of reactive communication towards proactively seeking out ongoing dialogues and building trust.

Concerns and queries: Given the concerns of some staff, it is legitimate to consider the suitability of I.I. for people who once had full verbal communication. Staff do need to be careful when trying to access the changing levels of both receptive and expressive communication in people with dementia. Therefore the author's believe that personalisation is the key, and that means communicating in a way that has meaning for the person.

Concerns about the use of touch in healthcare settings have been common barriers to I.I. Also stereotypes about personal space and respect for older people have also been cited as a reason not to touch. Therefore for I.I. to be embraced, dementia care services need to develop person-specific touch guidelines. Given all these concerns, the authors observe that I.I. has demonstrated the potential to be renewing and transformative for staff.

Reflections on using I.I. with families: The authors note that family caregivers have been very interested in I.I. and also that when working with families the authors have found that many family caregivers automatically move into communicating in an I.I. manner having spent a lifetime already tuned into one another, recognising particularly the value of touch, delighting in all interactions.

Conclusion: The authors state that I.I. can be an approach to improving well-being in dementia, that respects personhood, adds quality to the working lives of staff, and reintroduces a bond based on fun and understanding.

Part C: other significant research

Getting in touch with our feminine sides? Men's difficulties and concerns with Intensive Interaction

Culham, A. (2004) *British Journal of Special Education*, 31 (2), 81-88.

Methodology: This research addressed a number of issues faced by male practitioners using Intensive Interaction (I.I.) Using both questionnaires and interviews, data was gathered from over 35 practitioners, including F.E. lecturers, teachers, day-centre staff, psychologists, and speech & language therapists. Over half of the practitioners questioned had between 2 to over 10 years experienced in I.I. (the others having only limited experience of the approach).

General Results: The majority of practitioners reported using I.I. with students/clients with severe and profound learning disability, and a minority reported used the approach with a other groups of people such as those with sensory disabilities, emotional and behavioural difficulties, neurological difficulties, retirement home residents, clients with autism and people who were electively mute. The majority of respondents reported using I.I. as a '*vehicle*' to support various sessions across the curriculum. Many noted that I.I. worked very well in supporting curriculum areas such as independence skills, sensory activities, and basic skills. The remaining practitioners, including psychologists, day-centre staff, residential support workers and parents, used I.I. as a communication tool with their clients.

Some respondents identified a difficulty with the lack of clear criteria or standards in I.I. Some respondents found it difficult to reverse the traditional didactic teaching methods of their initial training, and found communication with the student as '*an equal*' difficult. Some respondents regarded the development of professional and practical skills through the use of I.I. as a primary benefit. Reported gains included improvements in communication styles, teamwork and collaboration; greater knowledge of students; and curriculum development. Many of the respondents felt that they needed more training and guidance with the practical skills of I.I., and some observed that too much time was spent intellectualising the approach and not enough time developing practical, classroom-based skills.

One teacher noted that parents are very supportive and are often astounded at I.I.'s results: *'It works… parents, many of whom like to become involved with developing their child's communication, can see it work for their children.'* A third of those questioned regarded 'developing relationships' as a distinct benefit of I.I. At least half of these respondents enjoyed the freedom that I.I. afforded them – an F.E. lecturer remarked: *'I.I. allows me to engage with my students in a way that is uncharacteristic of my normal teaching practice, to sit back and enjoy the ride.'*

For some it was the creation of 'communication opportunities' that was the most rewarding aspect of using I.I. with people with learning disabilities*: 'For the first time, I am able to enjoy another human being's company for its own sake.'* However, a third of respondents indicated a concern with the negative perceptions and attitudes held by 'mainstream' staff, from various agencies, with regard to the value and appropriateness of I.I.. One practitioner remarked: *'I find the reaction of others, who do not understand the individual and the procedure of communicating with them, difficult. Some people are unable to see the depth of both the students and I.I. and pass a judgement of failure or irrelevance.'*

Results pertaining to being a male practitioner: Half of the respondents reported that the issues of touch, working with female students and the fear of allegations of sexual assault have prevented them from doing I.I. One practitioner noted: *'My practice of I.I. is limited due to my fears and unease of working with female clients at the house.'* Another respondent noted that his team has had numerous staff development sessions regarding physical touch and gaining permission to touch, which had assisted male members of the team to be more comfortable around students/clients: *'The whole business about touch… male practitioners need to feel reasonably secure, that they know what the boundaries are and that they know what the establishment rules are on permission.'*

Another issue arising concerned support: the level and success of support was seen as dependent upon individual teams, personalities and managers. A respondent noted the difficulties around peer support: *'I feel slightly uncomfortable in certain situations because of the male/female divide … but I try not to let this affect my practice.'* Managerial support of I.I. practitioners was also a concern: whilst some celebrated their manager's proactive work and support, many questioned their manager's understanding of I.I. Lack of support from line managers and senior members caused some staff distress, alienation and in some instances ridicule. One therapist reported that *'Some senior managers can be dismissive of what we do.'*

The male practitioners revealed that, on average, only 20% of the team they worked with were male. Also, one respondent noted that many of his female colleagues looked to him to take responsibility for discipline and restraint, possibly because of his gender.

Conclusions: Although it isn't always clear what difficulties relate specifically to maleness, and what difficulties exist for practitioners of either gender, this research clearly illustrates the need of male practitioners for further support and development in the area of I.I.

Intensive Interaction and autism: a useful approach?

Nind, M. (1999) *British Journal of Special Education*, 26 (2), 96–102.

This article addressed the potential usefulness of Intensive Interaction (I.I.) for pupils whose learning disabilities are compounded by autism. It begins with a general outline of I.I., describing it as an approach to 'communication' suitable for children and young people with the most severe learning disabilities, who have not readily made relationships, established informal communication or who are unable to access the set curriculum.

Nind points out that there had been no focus on I.I. as an approach to meeting the specific difficulties and needs of learners with Autism Spectrum Disorders (ASD). She states that the need to address the relevance of I.I. for those individuals with a learning disability and autism as a separate group has arisen for two reasons: firstly the nature of the autistic condition - personal relatedness with others has been seen as a central impairment in the autistic condition; and secondly, much of the literature on autism emphasises an innate inability to learn from natural interactive processes.

Nind briefly discusses the range of intervention processes used with people with autism spectrum disorders, differentiating between 'special' and 'naturalistic' approaches. Whilst the challenging nature of many individuals with autism has encouraged a focus on 'special' intervention processes, such as TEACCH and Lovaas therapies, there are those who have recognised the benefits of a non-directive interactive style. The article goes on to say that naturalistic approaches do not dominate in the current climate however, where the focus remains on direct training and behavioural intervention. Nind recognises that not all practitioners in the field have shared the implicit assumption that those with learning disabilities and autism are part of the target group for I.I.

To argue the case for I.I. she draws on both theoretical and empirical perspectives. The premise that underlies I.I. is that learning to communicate is not like learning a basic skill, which can be task analysed, with constituent sub-skills taught separately in a structured programme. Becoming an intentional communicator involves learning about oneself and others, learning that we can have an effect on others and that we can share meaning (Harding, 1982). To be effective communicators, we have to *want* to communicate and have a concept of what communication is all about. Nind argues that the best and possibly only model we have which addresses the development of the desire to communicate with others is in caregiver-infant interaction. The only teaching approach based on this model is I.I.

The empirical evidence cited by Nind looked at the usefulness and appropriateness of I.I. for learners with autism. In this paper Nind considers a single case study, a series of narrative case studies and lastly questionnaire and interview data from teachers using I.I. The case study looked at an adult (Kris), who was diagnosed with autism at the age of four. I.I. was used with him over a 12-month period when he was 28, and any developments measured. Nind notes that there were specific new developments noticed in Kris, which she associates with the introduction of I.I. These included a greater interest in watching people and moulding and relaxing when cuddled.

The narrative case studies presented provide weak empirical evidence in that there were no structured observations, but they do complement the study of Kris with their rich descriptions and reflections. This section describes the attempts of staff and parents to use I.I. with two boys, both of whom are diagnosed with autism. Both accounts discuss how I.I. was introduced, and the resulting developments from using this approach. Such developments included giving sustained attention, initiating contact and allowing others to share in activities.

The last body of evidence that Nind looked at was a study that aimed to identify examples of good practice of I.I.. This study provided data looking at the views of practitioners using this approach. Questionnaires were sent to a number of special schools and units in England, looking at the usefulness of using the approach. Results from these questionnaires identified benefits of using I.I. for both pupils *and* staff. Benefits for pupils included self-motivation, improved communication and the development of relationships. Benefits for staff included improved observation abilities and feeling more positive about the children. Follow-up interviews conducted with seven teachers offered rich observations to support the questionnaire data. Nind notes an interesting pattern that emerged from the findings. Staff did not seem to be concerned about the debate as to whether an interactive approach would make it harder for those with autism to learn. Instead, the decision to use I.I. was based on an assessment of the individual child and the perception of their needs, regardless of whether they had autism or a learning disability.

Finally Nind observes that despite the current emphasis in Special Education on the National Curriculum, interactive approaches continue to develop and be important both in the general field of learning disabilities and concerning individuals on the autistic spectrum. The article concludes that there is every reason for I.I. to be adopted as a useful and effective strategy for working with individuals whose learning disabilities are compounded by autism.

A Dual Aspect Process Model of Intensive Interaction

Firth, G. (2009) *British Journal of Learning Disabilities*, 37(1), 43-49.

Since the 1980s, intensive Interaction has been employed to meet the social and communicative needs of people with severe or profound and multiple learning difficulties and/or autism. The approach, which employs naturalistic interactions with learning disabled people based on the 'infant-caregiver' interactional model, was initially developed by teachers Dave Hewett and Melanie Nind (*Access to Communication*, 1994*)*.

However, in this paper the author contends that certain aspects of the approach are not universally conceptualised, and that published definitions of the approach do not necessarily advance a single consistent conceptualisation or procedural philosophy. It is also the author's view that, in the majority of cases across the multi-disciplinary community of Intensive Interaction practitioners and advocates, there emerge two general process models that are used to describe or conceptualise Intensive Interaction.

Firstly there is a '*Social Inclusion Process Model'*. This model advocates a primary aim of inclusively responding to a learning disabled person's communication, however it is expressed. When alluding to this model, practitioners tend to use terminology such as '*communication'*[1], '*understanding'*[1], '*shared language*'[2] and '*connecting'*[2] to describe the process. This process model appears to be evidenced by practitioners who recount instances of an initial rapid expansion of a learning disabled person's sociability and communicative practice, presumably as their latent communicative means are expressed in response to Intensive Interaction techniques.

Secondly, and subsequent to the first model, there is a *'Developmental Process Model'* of communicative skill progression and acquisition. This model espouses a need to have educative or developmental goals when using Intensive Interaction. Indeed with such a *'Developmental Process Model'* it is any resultant communicative or cognitive skill acquisition that is the major aim of any Intensive Interaction intervention. When alluding to this process model practitioners tend to use terminology such as *'learning'*[1+2]*, 'developmental'*[2], and *'extending'*[2].

As can be seen in the diagrammatic representation of what the author calls a *'Dual Aspect Process Model'* of Intensive Interaction both process models may be seen as representing differing aspects or stages of Intensive Interaction. Lying between the stages is what the author calls a transitional phase, which begins as the initial rapid expansion of interactive behaviour associated with a *'Social Inclusion Process Model'* tails off. The author also states that such a transitional phase is already described by the term *'plateauing'* (Nind & Hewett, 2nd ed. 2005, p.134). Any progress subsequent to this *'plateauing'* requires the onset of the *'Developmental Process Model'* during which a more gradual development of the learning disabled person's communicative skills takes place.

Interestingly, across the body of published research into Intensive Interaction, shorter, generally non-educational research carried out over days or weeks, according to the author, seems to support a rapid *'social inclusion process model'* of increased responsiveness. In contrast, in those papers written from an educational perspective (carried out over months, terms or years), there are claims made that the novel or increased social responses arise out of an extended learning or developmental process. And thus, the author claims, these longer-term research studies provide evidence for a *'Developmental Process Model'*.

This paper goes on to give a broader analysis of learning theory to help describe the process through which social inclusion supports developmental progression. It is suggested that Lave and Wenger's (1991) situated learning theory of 'Legitimate Peripheral Participation' provides a good theoretical representation of how authentic engagement in collective activities (in this case I.I.) is a necessary precursor to conceptual development and skill acquisition. 'Legitimate Peripheral Participation' shows how a learner can gradually become part of a 'community of social interactors' once their emergent communicative and sociable behaviours are legitimised and responded to with Intensive Interaction. Initially the learning disabled person's engagement in such a 'community of social interactors' might well be halting, tentative and exploratory, however, through repeated joint experience (in this case of Intensive Interaction), the collaboratively organised social activity develops greater levels of sophistication i.e. developmental progression takes place.

According to the author, the '*Dual Aspect Process Model'* of Intensive Interaction is a reflective response to his own experiences of practicing and contemplating Intensive Interaction, and it is his hope that the model may help others to identify more clearly their main purpose in employing Intensive Interaction.

Notes:

1. Terminology used associated with the use of I.I. by social care staff in semi-structured interviews during qualitative study using 'grounded theory' methodology (2005).
2. Terminology used associated with the use of I.I. by clinical psychologists in semi-structured interview during qualitative study using 'grounded theory' methodology (2006).

References:

Lave, J. & Wenger E. (1991) 'Situated Learning: Legitimate Peripheral Participation' in Bredo, E. 'Reconstructing Educational Psychology' in Murphy, P. (Ed) (1999) *Learners, Learning & Assessment,* London, Chapman Publishing.

Nind, M. & Hewett, D. (2nd ed. 2005) *Access to Communication: Developing the basics of communication with people with severe learning difficulties through Intensive Interaction.* David Fulton, London.

Effective Engagement through Intensive Interaction

Sharma, V. & Firth, G. (2012) *Learning Disability Practice, 15* (9), 20-23.

This paper reviews research on the effects of Intensive Interaction on the conduct, health and wellbeing of people with learning disabilities who exhibit severe challenging behaviour, and on the wellbeing of their carers. The authors conclude that Intensive Interaction can benefit clients, carers and staff, but that research is required to encourage developments in policy and practice, and that additional staff training is needed to ensure that Intensive Interaction strategies can succeed.

The authors describe how individuals with severe and/or profound and multiple learning disabilities (S/PMLD) and/or autism may present with severe challenging behaviour, this is 'behaviour of such intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy' (Emerson et al, 1988). Such behaviours can include, but are not limited to, head banging, punching and biting (Oliver, et al., 2003).

The authors also point to a contrasting perspective by Ephraim (1998) that there is no such thing as severe challenging behaviours, and that these are socially aberrant forms of communication i.e. 'A punch in the face' is an act of communication, although the message behind the punch may not be understood.

The paper goes on to review existing research with differing results as to the effectiveness of Intensive Interaction in reducing the severity and/or frequency of severe challenging behaviours in individuals with S/PMLD and/or autism (Caldwell, 2010; Nind and Hewett, 2005).

However, the authors mention that previous research suffers from a number of methodological limitations, such as small sample sizes (Elgie and Maguire, 2001), varying practitioner ability/experience (Zeedyk, et al., 2009), varying definitions of "challenging behaviour" and a lack of objective assessment of behaviour pre- and post-Intensive Interaction interventions (Irvine, 2001). These limitations hinder the ability to generalise findings across user groups, and may also explain the lack of adoption of Intensive Interaction by learning disability services. As such, further methodologically robust research is requested by the authors.

In conclusion the authors suggest that the current body of research indicates that Intensive Interaction techniques can reduce the severity and frequency of severe challenging behaviours, and improve the health and wellbeing of individuals with S/PMLD. Moreover, viewing the behaviours as a form of communication (Ephraim, 1998) suggests that carers need to 'learn the language' of their clients or service users. Thus, Intensive Interaction encourages carers to listen to and understand what individuals are saying with their body language and facial expressions.

It is also the author's view that by adopting Intensive Interaction techniques, staff can communicate more effectively with people with S/PMLD, and introduce them to new worlds of social interaction.

Finally the authors propose that further evidence of the benefits may encourage policy makers and practitioners to adopt Intensive Interaction practices, thereby enabling individuals with S/PMLD and their families to achieve a better quality of life.

Clinical Psychologists' Views of Intensive Interaction as an Intervention in Learning Disability Services

Berry, R., Firth, G., Leeming, C. & Sharma, V. (2014)

Clinical Psychology & Psychotherapy, 21 (5), 403-410.

Some Background

This explored clinical psychologists' views of Intensive Interaction as an intervention in learning disability services in terms of its theoretical underpinning and empirical support. It was also hoped that the study might illuminate significant issues influencing clinical psychologists' adoption of the approach, including the participants' thinking about the relevance of established psychological models and theories.

Overview of the Study

This qualitative study involved interviews with eight clinical psychologists from across the UK who were known to be working with adult clients with severe or profound intellectual disabilities, and to be using or advocating Intensive Interaction. The study utilised a grounded theory approach to analyse and categorise the resulting data.

Results & Discussion

All the participants were asked whether they saw Intensive Interaction as being concordant with any established psychological theories and were given specific exemplars. The models that were spoken about were attachment theory, developmental theory, Person-Centred Therapy (PCT), social role valorisation/normalisation, behaviourism, Ephraim's 'augmented mothering', attribution theory, sensory integration, psychoanalytic models, social constructionism and humanistic psychology.

Of the six participants who spoke about attachment theory, all described Intensive Interaction as being consistent with it. Under the category of 'theory', one of the specific concepts was labelled 'person-centred counselling/therapy/theory', but little material was coded there. In contrast, there was considerably more interview data categorised under the label 'the psychologising of Intensive Interaction'. This category contained statements in which the participants used psychological language to talk about Intensive Interaction rather than making specific reference to a theory or therapy.

To summarise: what the participants talked about when using Intensive Interaction and their comments about its benefits, can be best understood in Person-Centred Therapy terms; they described it as a means for establishing psychological contact.

First impression taken from the interviews was that the participants seemed to be acting out of character for psychologists i.e. they were perhaps deliberately using prosaic or commonplace language to describe complex psychological issues and perspectives.

Upon reflection, the authors realised that they themselves were not fully confident about their own understanding of the psychological underpinnings of Intensive Interaction. Being limited by the dearth of psychologically based literature on the approach, they decided to re-visit Geraint Ephraim's doctoral thesis and his subsequent publications on 'augmented mothering'. In so doing, the authors anticipated that they would find a clear theoretical rationale for 'augmented mothering' against which they might compare the conceptualisations of Intensive Interaction by the clinical psychologist participants. This expectation, however, was not fulfilled.

Finally, the authors stated that what is needed from clinical psychology is a more rigorously scientific approach involving theory development and testing via clinical case studies. Without a coherent process of theory development, and the systematic generation of an evidence base for a psychological model of Intensive Interaction, the approach is open to being dismissed as more commonplace than scientific.

The Effectiveness of Intensive Interaction: A Systematic Literature Review

Hutchinson, N. & Bodicoat, A. (2015)

Journal of Applied Research in Intellectual Disabilities, 28 (6), 437-454.

This paper looked at 15 quantitative and 3 qualitative peer-reviewed papers which examined the efficacy of Intensive Interaction (I.I.) with participants of different ages in both educational and residential settings:

In Nind's 1996 study, a multiple-baseline study with 6 adult participants, there was some evidence that all participants gained in their sociability and communication, although according to the authors these improvements were not always directly concurrent with the start of the I.I., casting some doubt as to the cause. However, the authors also state that Nind gave persuasive arguments for the link i.e. that the participants had long-standing communicative difficulties, many behaviours occurred for the first time after the I.I. began, and no other events were know to be concurrent with the improvements.

The various studies by Kellett (2000/3/4/5) were said to have unstable baselines and variability in the scores coded, thus limiting the conclusions that could be drawn. In Barber's study (2008) the extended baseline to post-I.I. measurement cast doubt on the cause of the improved sociability (and data from only 3 of 11 students was given). Leaning & Watson (2006) reported data from only 3 of 5 participants, although these did show improvements, but the missing data again raised bias issues. Samuel *et al*. (2008) reported an increase in social behaviour, but these increases were small (<5% were classed as a 'noticeable increase').

Other papers also used video, with Zeedyk simplifying the analysis, thus making it easier to see that all participants increased on their levels of 'Engagement' with I.I. The use of an ABA methodological design by Argyropoulou & Papoudi (2012) provided strong support for I.I. being responsible for increasing the amount of initiations from the child participant in their study. In all three of the qualitative papers reviewed, sociability was perceived to be enhanced by I.I.; however, validity was limited in two studies by a lack of clear methodology.

According to the authors the conclusions that can reasonably be drawn from the evidence did not reflect the positive anecdotal evidence reported by practitioners of I.I.: however, as the authors point out, in a systematic review anecdotal reports are considered 'insufficient evidence', and books and dissertations are excluded due to the lack of peer reviewing.

Conclusions: according to the authors '*any conclusions [about I.I.] should be cautious due to findings being limited by unstable baselines, AB designs and small improvements*. *However, all papers reviewed found at least some increase in sociability. The research so far could indicate that I.I. may help to develop communicative abilities; however, the limitations of the studies prevent firm conclusions being drawn'*.

The limited empirical evidence did not, in the authors' opinion, support the powerful claims made by the people who were conducting the I.I. However they say that this may be due to the difficulty in conducting good quality, methodologically and ethically sound research with people with intellectual disabilities. The authors also commented that the use of video coding of social behaviours in relation to an approach like I.I. seemed potentially reductionist, and that other methods of assessment might be more appropriate

Summary: Because the studies had clear limitations, the authors stated that they could not firmly conclude whether I.I. is likely to be a helpful for people with learning disabilities and/or autism. But, based on the studies examined in this paper, the authors positively offered several ways of increasing the effectiveness of the approach. These include a team based approach and support, so that in-depth exploration of difficult issues can be a component of any I.I..

The authors also stated that: '*to provide I.I. with the evidence base it lacks at present, the methodological quality of both quantitative and qualitative studies needs to be examined closely, and research, once finished should be submitted to peer-reviewed journals*'.

Teaching Intensive Interaction to paid carers: using the 'communities of practice' model to inform training

Rayner, K., Bradley, S., Johnson, G., Mrozik, J., Appiah, A. & Nagra, M. (2016)

British Journal of Learning Disabilities, 44 (1), 63-70.

Introduction: The acquisition of skills through observation at the periphery before moving into active participation suggests learning is 'not a process of … internalisation of knowledge by individuals, but as a process of becoming a member of a sustained community of practice' (Lave, 1991). This 'communication of practice' approach was applied to a six-week I.I. training programme for carers which comprised three workshops utilising didactic teaching, reflective group discussion, peer support and formal supervision of the carers by their managers, who in turn received supervision from workshop facilitators. This study evaluated the training programme by identifying key themes emerging from the participants' experience of the programme and their subsequent use of the techniques.

Method: Participants were two carers and one home manager (aged 48, 44 and 25 years) who had no formal training in I.I.. The participants were interviewed within six months of training, the data collected through semi-structured interviews asking broad questions about the training e.g. the purpose and features of I.I., experiences of the training and practice, support and supervision needs and the presentation of the clients and colleagues. The transcripts were subjected to *Interpretative Phenomenological Analysis* - a qualitative research approach endeavouring to examine how people make sense of their life experiences.

Results: The analysis revealed a master theme of 'insight' which covered carer and client progress, change and development. 3 inter-related dominant themes also emerged: (i) *investment,* (ii) *transformation,* and (iii) *challenges.*

i) Investment: The staff interviewed expressed feelings of personal development from practising I.I.. Staff suggested that they now fully responded to individual needs, and so addressed more than just the basics: *'The training at times it (...) it made it I think it makes you feel quite emotional (...)'.* Staff felt they were gaining in both competence and confidence: *'the more of the sessions I went on the more fluid it became, the more easier, the less inhibited I felt...'.*

Staff members found it difficult to put what they were experiencing into words, and suggested that in order to understand the change in their practice one would have to actually see it: *'... all I can liken it t' (...) the light bulb goes on and the communication come out (...) you can't put it into words you've got to be there'.*

ii) Transformation: the Staff described a transformation in clients, suggesting that I.I. had brought clients to life: *'It's just amazing how it just the conversation's getting more and a lot of their vocabulary is getting more and more each week'.* There was also an evident shift in the attitudes of the participants towards the training: *'initially when I saw the timetable I thought "well that's not very much, that would be great just an hour or two" but it was an intense hour or two that you could get a lot out of and learn a lot from'*

Participants also shifted in their sense of what makes an effective intervention, and perhaps adjusted their expectations of what is a good clinical outcome *'that does seem to calm him down, it might only be for a few seconds but it works*'. There was also evidence that I.I. allowed care staff to think in a more person centred way about choice and the expression of wants. It was noted staff also experienced higher levels of job satisfaction.

Supervision was valued by the staff; it raised self-confidence and helped staff to develop connections with clients. A consistency and unity within the working environment was highly evident: staff were intent on fostering productive relationships with colleagues and clients alike. Staff also expressed a need for all staff to be trained in I.I.

iii) Challenges: Staff evidenced initial resistance as they could not at first envision the benefits of I.I., however they soon came around after seeing the results for themselves. Like clients, it appeared staff had also experienced things that affected them profoundly: *'I just thought ... I just couldn't believe what I was seeing ... I've worked with this gentleman nearly four years and I have never seen him do that'*

Discussion: The overall impression given is the enormity of the positive experiences of carers using I.I. and the profound shift in beliefs, progress and development. This study suggests that effective communication is crucial for the development of a person's identity, for increased social inclusion and improved quality of life. In this study staff found relationships more meaningful and held a deeper understanding of their clients, their co-workers and themselves. Staff gained a new found knowledge of clients' needs and a new connection with them.

The analysis demonstrated how I.I. can lead to a higher quality of person-centred care, promoting empathic communication, improving the individual's wellbeing, self-worth and quality of life. This implies that if I.I. training is accessible to staff in various care settings, staff will develop improved insight and a deeper relations with co-workers and clients, creating a potentially more resilient workforce.

The analysis suggested workers felt nurtured by supportive supervision, evidencing how a 'community of practice' can act as a protective factor against the potential for initiative decay. The findings also suggest that systemic practices derived from I.I. could foster a working culture which promotes respect and inclusion for clients.

The wider implications of the study include the ability to transform procedures and attitudes in staff regardless of length of time in service or how regimented a service is. The profound effect on the staff members can be seen in the shift in the language they use to describe the approach, their use of it and the results they have seen.

Some other Intensive Interaction articles & papers of interest*:*

Barber M. (2007) 'Imitation, interaction and dialogue using Intensive Interaction: tea party rules', *Support for Learning, 22, 124–30.*

Caldwell, P. (2006) 'Speaking the other's language: imitation as a gateway to relationship', *Infant and Child development*, *15, 275 – 282.*

Crabbe, M. (2007) 'The Intensive Interaction research project… and beyond', *Royal College of Speech and Language Therapy Bulletin*, August, 12-13.

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Firth, G., Poyser, C. & Guthrie, N. (2013) 'Training care staff in Intensive Interactions', *Learning Disability Practice*, 16 (10), 14-19.

Gardner, A. and Rikberg Smyly, S. (1997) 'How do we stop doing and start listening: responding to the emotional needs of people with learning disabilities', *British Journal of Learning Disabilities*, 25, 26-30.

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Kellett M. (2004) 'Intensive Interaction in the inclusive classroom: using interactive pedagogy to connect with students who are hardest to reach', *International Journal of Research & Method in Education, 27 (2),* 175–88.

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Nind, M. & Powell, S. (2000) 'Intensive Interaction and autism: some theoretical concerns', *Children and Society*, 14 (2), 98-109.

Samuel, J. (2001) 'Intensive Interaction', *Clinical Psychology Forum*, 148, 22-5.

Samuel, J. (2001) 'Intensive Interaction in context', *Tizard Learning Disability Review*, 6 (3), 25-30.

A glossary of useful research terms:

- **BASELINE PHASE:** a baseline phase is the period in research before a new approach (intervention) is started.
- **BASELINE ASSESSMENT:** a baseline assessment is an assessment of someone's skills or competences prior to the start of an intervention in order to be able to objectively evaluate the effects of the intervention.
- **DATA:** information gathered and organised for analysis or used as the basis for a decision.
- **EFFECTIVENESS:** effectiveness relates to how well a treatment works in the practice of medicine, as opposed to efficacy, which measures how well treatment works in clinical trials or laboratory studies.
- **EFFICACY:** efficacy indicates the capacity for beneficial change (or therapeutic effect) of a given intervention.
- **EMPIRICAL DATA**: are data produced by 'theory-neutral' observations or experiment.
- **EVIDENCE:** is everything that is used to determine or demonstrate the truth of an assertion.
- **EXTRANEOUS VARIABLES:** a research term that indicates factors other than the 'independent variable' (e.g. an Intensive Interaction intervention) that can have an effect on outcomes and may confound or confuse any analysis of the effect of an intervention.
- **GENERALIZABILITY:** is how well research findings and conclusions from a study conducted on a sample population can be applied across the population at large.
- **IMPLEMENTATION:** the stages and process of putting something into practice.
- **INTER-RATER RELIABILITY or INTER-RATER AGREEMENT:** is the degree of agreement among research data-raters. It gives a score of how much homogeneity or consensus there is in the ratings given by observers or data collectors.
- **INTERVENTION PHASE:** the period in research when a new approach, such as Intensive Interaction, has been introduced for evaluation purposes.
- **OBJECTIVE ASSESSMENT:** detached, objectivised and unbiased assessment, not distorted by personal experience, feeling or knowledge.
- **OBSERVATION:** 'observation' is the process of looking specifically at what is going on in a certain set of circumstances. Observations are not subjective and individualistic explanations, but should be independent, impartial and un-prejudiced.
- **OPERATIONALISATION or IMPLEMENTATION:** the stages and process of putting something into practice.
- **QUALITATIVE METHODS:** methods that use verbal accounts and description, rather than numbers, to gather evidence or data.
- **QUANTITATIVE METHODS:** research methods that gather numerical data, and usually subsequently use statistical techniques to manipulate and create meaning from the data.
- **QUASI-EXPERIMENTAL DESIGN:** a 'positivist' research design (i.e. one looking to generate empirical data) for testing hypotheses while recognising the naturalistic context and impossibility of controlling all variables.
- **RESEARCH ETHICS:** agreed rules and standards concerning the ethical conduct of research.
- **RESEARCH EVIDENCE:** is evidence accumulated through some kind of structured observations of some kind of particular variables, carried out in some kind of previously defined or controlled conditions.
- **TRIANGULATION:** in research, the use of data or evidence from more than one source to increase the validity or reliability of any findings.
- **VIDEO ANALYSIS:** structured analysis of previously recorded video footage to see exactly what happened e.g. after a session of Intensive Interaction.

This document contains only some of the published research reporting on the outcomes of Intensive Interaction. The document is updated on a yearly basis as other research papers and summaries become available.

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Anyone wishing to point us to more Intensive Interaction research papers, somehow comment on this document or order updated copies should contact:

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