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Intensive Interaction and its relationship with the triad of impairments in ASD

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Chapter overview

The prospect that Intensive Interaction has particular application to people who have autistic spectrum disorder (ASD) will be placed in the context of present theoretical perspectives on the nature of ASD. In particular, the way in which both the learning outcomes and efficacious interactive nature of the teaching and learning sessions addresses the effects of the 'central triad of impairment' will be discussed.

Brief overview of ASD and the definition of the triad

My initial introduction to ASD was during a university course, where the general consensus seemed to be that all people with ASD exhibited the same deficits and strengths – there was no reference to a 'spectrum' of autism, and certainly no mention of the variety of severe and complex needs of many individuals with autism. It was only when I began working with young people with ASD that I realised the range of individual differences and, critically, the vast complexity of trying to teach social skills – those attainments which seem to occur so naturally and effortlessly in neurotypical children. My experience of the approaches used to teach individuals with ASD

did not seem to incorporate any means of teaching these social skills or, if they did address the issue of social communication at all, it was in a manner which seemed artificial and formulaic.

I anticipate that all readers will probably be acquainted with the content of this section. However, I will briefly review the conceptualisations of the triad of impairments in autism in order to introduce the central theme: the beneficial partnership between the processes of Intensive Interaction and its outcomes, and our understandings of the social and communication impairments of the triad.

The impairments in social and communication skills in ASD are well documented, dating back to the original work of Kanner (1943, cited in Frith, 2003: 8–9), who used the following deficits as diagnostic features of autism: 'Autistic aloneness' – described as impairments in communicative behaviour, interactions and social skills, and an 'inability to relate to people in an ordinary way.' 'Obsessive insistence on sameness' – Kanner felt this went to a deeper level than just a need for routine, and included symptoms such as repetitiveness, rigidity, single mindedness, pedantry and the inability to judge the significance of subtle differences.

At around the same time as Kanner's work, Asperger (1944, cited in Frith, 2003: 9–10) also published research about a group of children psychologically similar to those Kanner had observed, although the children studied by Asperger were not as severely impaired as those of Kanner's study. Asperger noted some additional features of the children, particularly with relation to their appearance and non-verbal social skills, documenting 'there is a poverty of facial expression and gestures … the children totally follow their own impulses, regardless of the demands of the environment … they are simply not geared towards learning from adults or teachers' (Asperger, 1944, cited in Frith, 2003: 10).

A diagnosis of 'classic autism' usually refers to the original diagnostic criteria as described by Kanner, and often indicates additional learning disabilities in 40–55 per cent of people (Chakrabarti and Fombonne, 2001). Autism is classified as a pervasive developmental disorder within the DSM-IV (American Psychiatric Association, 1994).

The deficits highlighted by Kanner and Asperger have been more recently described as 'the triad of impairments' following work by Wing and Gould (1979). This is now a commonly used descriptor for the deficits in social interaction, communication skills and imagina-

tive play that define ASD as a disorder. It is of note that the triad of impairments focuses very specifically on impairments in 'social' communication, rather than viewing communication as a whole, general entity.

The emphasis is on the lack of ability and understanding socially, rather than an inability to communicate at all. The ability to communicate in a functional capacity (for example, requesting a drink, or the door to be open) often appears to be intact in people with ASD (Kaiser et al., 2001). Even with individuals who are unable to verbally communicate, there is evidence of an ability to communicate functionally (Tomasello and Camaioni, 1997; Sowden et al., 2008). Wing gives examples of non-verbal children with ASD showing an propensity to use other people as 'objects' in order to achieve need, for example: 'If they want something they cannot reach they grab you by the back of your hand or arm, not placing their hand inside yours or looking up at you, and pull you along to use your hand to reach the object they desire or to carry out an action for them such as turning the handle of a door' (Wing, 2002: 35).

The impairment in communication and social skills within ASD therefore seems to stem from a difficulty in using, interpreting and understanding the social aspects of communication, rather than specific difficulty in understanding the functional purpose of communication (Baron-Cohen and Bolton, 1993; Halle and Meadan, 2007).

The details of these impairments in social communication and interaction within ASD have been well chronicled. Children with ASD frequently avoid initiating or maintaining eye contact with others (Hutt and Ounsted, 1966, cited in Leekham and Hunnisett, 1998) and have difficulties following and monitoring gaze (Leekam and Hunnisett,1998) in giving, requesting and sharing information (Hurtig et al.,1982) and in conversational turn-taking (Prizant and Schuler, 1987). Deficits in imitation skills have also been demonstrated (Rogers and Pennington, 1991), in comprehension and expression of facial expressions (Sigman and Capps, 1997) and in use of gestures (Ohta, 1987).

Deficits in communication include lack of understanding of linguistic communication (for example, speech sounds, grammatical information and word meanings), paralinguistic communication (intonation, gesture and facial expression) and pragmatics (topic initiation, communicative intention and presupposition) (Landa, 2007). Infants with ASD can exhibit deficits in social and communi-

cation skills as early as the first year of life, for example, in the shar-ing of affective expression (Trevarthen and Daniel, 2005) and the use of gestures and responsiveness to others (Baranek, 1999). These deficits become more pronounced in later childhood (Wetherby et al., 1998, 2004), particularly in the areas of initiation of social com-municative acts such as showing and joint attention (Baron-Cohen, 1989b; Wetherby et al., 1998).

Individuals with autistic spectrum disorder therefore have, by defini-tion, impairments in social interaction and communication skills. While it is possible to teach individuals with ASD practical and self-help skills (National Research Council, 2001), the development of social communication and interactions skills is much more difficult to achieve and maintain (Murphy et al., 2005). Longitudinal studies of cohorts with ASD show that skills in the areas of communication and social interaction are least likely to improve or even, in some cases, be maintained (Beadle-Brown et al., 2006).

In the 1980s' theories surrounding 'theory of mind' in people who have autism became prominent. 'Theory of mind' is usually depicted as the ability to understand the knowledge, motives and actions of others, and is commonly assessed using experiments where individuals are asked to predict the thoughts and actions of actors in specific situations. Baron-Cohen (1997) suggests that 'theory of mind' is the way in which human beings relate, converse and socialise – including the general ability to interpret and react to a wealth of subtle social cues and situations. Baron-Cohen (1989a, 1995) and Frith and Happe (1994) demonstrated that children with ASD had difficulty with tasks and activities which required them to be able to see the viewpoint of others. Baron-Cohen called this deficit 'mind-blindness'.

Mind-blindness has implications for the whole symphony of com-municative performance. In order to be able to communicate socially, certain flexible facilities are vital. This could include knowl-edge about and interpretation of, the person with whom you are communicating. For example the person's likes, interests or dislikes; your perception of their understanding of a subject; interpretation of their state of mind moment by moment together with the flow of their feelings and emotional state. Additionally, the ability to mod-ify and alter communicative style based on this feedback in order to make it accessible and interesting to the other person is critical. Without this knowledge or ability to make insights or 'mindread' social conversations will be adversely affected.

Furthermore, Frith and Hill (2003) make the point that the effects of mind-blindness can extend to difficulty, sometimes extreme difficulty, in reading the detail of non-verbal communications. This can include difficulties in using and understanding non-verbal paralinguistic communication such as gesture (Mundy et al., 1993), eye contact and eye gaze (Koegel et al., 2009) and facial expression (Wallace et al., 2008).

This focus on non-verbal impairments has more recently moved to addressing what Lakin (2006) describes as 'automatic non-verbal communication'; that is, the exchange of the myriad of facial and other non-verbal signals that takes place on a non-conscious but still effective level between people communicating. Attention is now being given to the possible impairment of neurological factors such as mirror neurons in automatic processes (see McIntosh et al., 2006). My professional view at this time is that these trends towards greater focus in these areas are beginning to address the triad in more depth, and are bringing a greater understanding of the complexity of impairment in autism. More pertinently, the findings of neurological research are beginning to reflect the 'gut feeling' nature of Intensive Interaction. Practice that was initially led by empathy and instinct is now being supported by neurological reality.

Surely all of us involved – parents, carers, teachers and support assistants – share a frustration and bewilderment at the prospect of trying to nurture social interaction and communication with individuals with autism. Our current knowledge of the triad of impairments and its impact upon social and communicative skills not only emphasises the severity of difficulty in these areas, but must also impact upon how we enable these skills to be acquired.

The National Research Council (2001: 40) suggested that educational goals for students with ASD and additional learning difficulties often need to address language, social and adaptive skills that are not part of standard curricula. As I started out as a teacher of young people with ASD, I was intrigued by the reality of the central effects of the triad on the individuals with whom I was working. It seemed obvious to me that working with Intensive Interaction focused strongly on the communicative and social nature of their impairments, and utilised existing communicative actions of the students. The other popular approaches I observed in use did not achieve this, nor hold the power to create engaging interactions with them.

The fundamentals of communication and what is taught/enhanced through the use of Intensive Interaction

My understanding of the way the processes in Intensive Interaction, in particular the fundamentals of communication relate to the triad of impairments in ASD form this section.

The link between the outcomes of Intensive Interaction activities and the potential impact of these outcomes upon the triad of impairments is not in any way radical or improbable. However, I feel that this link is not acknowledged, nor indeed even recognised, by many people working within the field of ASD. To me, Intensive Interaction seems a logical and obvious approach to fostering and developing communicative and social abilities in a learner-led, naturalistic way. It also addresses these issues with more depth and richness than any of the other currently used ASD approaches, focusing on areas of communicative development which are not often attended to by the more structured, teacher led methods.

The 'fundamentals of communication' (FOC) (Nind and Hewett, 1994) is the name given to the description of social, communicative and interaction skills that are developed through the use of Intensive Interaction. The FOC are well described within the Intensive Interaction literature (Firth 2010; Firth and Barber, 2011; Hewett, this volume, Chapter 9; Nind and Hewett, 1994, 2001, 2005) and are based on the descriptions of outcomes within research on early infant–caregiver interactions. These 'fundamentals' form the basis of all subsequent social skills, and potentially, all subsequent learning (Hewett, this volume Chapter 9). The FOC can be defined as addressing the objectives described below, although this list is by no means exhaustive.

- learning to give brief attention to another person

- to share attention with another person

- learning to extend those attentions, learning to concentrate on another person

- developing shared attention into 'activities'

- taking turns in exchanges of behaviour

- to have fun, to play

- using and understanding eye contacts

- using and understanding facial expressions

- using and understanding non-verbal communication such as gesture and body language

- learning and understanding the use of physical contact

- learning, using and understanding vocalisations, having more varied and extensive vocalisations, gradually leading to more precise and meaningful vocalisations

- the possible formation of neural links.

The learning attainments within the fundamentals of communication focus on many of the areas of communication and/or social communication deficit and impairment described within the triad. Whether intentionally or inadvertently, Intensive Interaction seems to be an approach refined to the complexity of the communication impairments described in the triad. This does not imply in any sense that the approach is a panacea for autism, but that it is well focused in its outcomes upon the effects of some of the major impairments.

How the FOC work alongside the triad of impairments

As previously observed, Intensive Interaction was not developed as an ASD-specific approach. The initial group of learners who accessed Intensive Interaction were a group of adults representative of the range of impairments in learning difficulty. Dave Hewett and Melanie Nind make the point however that many (Nind and Powell, 2000), potentially more than half (discussion with Dave Hewett) had a diagnosis of ASD, and that there 'are many senses in which during its long development, Intensive Interaction became beautifully tailored to the learning and lifestyle needs of people on the spectrum' (Hewett, this volume, Chapter 9).

Subsequent to Nind and Hewett's early work, studies of Intensive Interaction have demonstrated increases in early social skills like smiling, engaging with others, and interactive games (Nind, 1993, cited in Kellet and Nind, 2003: 15). Kellet (2001, cited in Kellet and Nind, 2003: 16) reports increases in interactive social behaviour, and levels of engagement, following the implementation of Intensive Interaction for students with Profound and Multiple Learning Difficulties (PMLD) and autism. 'For those students who have not yet learned the fundamentals of early social communication, developing sociability and communication is an essential first step in their learn-

ing. Without it learning cannot become meaningful. Intensive Inter-action is one approach within the umbrella of interactive pedagogy that has shown to be particularly successful' (Nind and Kellet, 2003: 185).

Peeters and Powell (2000) suggest that the responses given by the interactive partners during Intensive Interaction sessions assign social meaning to the learners' own behaviours. This interpretation of social significance or 'imputing' of meaning (Nind and Hewett, 2005) by the adult interactive partner also enables the learner to interact without having to adapt their own communication style. The learner is enabled to have a meaningful role within an interac-tion, without the pressure to communicate in a 'typical' way (Nind and Powell, 2000). Given the atypical communicative actions and responses often witnessed in people with ASD (Cox and Mesibov, 1995; Frith, 1991) it seems fitting to utilise an approach which accepts other, often idiosyncratic forms of communication, as social and meaningful in intent.

Imitation is accepted to be the single most frequently seen type of teacher responsiveness within Intensive Interaction activities (Nind and Hewett, 1994; Nind and Powell, 2000). I have found imitation to be a starting point to develop awareness of self and others, and to demonstrate to the learner that they can have control over others. The use of imitation with children with ASD has been found to increase social behaviours (Landa, 2007; Nadel et al., 1999). Imita-tion from an adult can increase eye contact, gesture and touching in children with ASD, as long as it is child led (Wimpory et al., 2007). Comparisons of imitative child-led and adult-led teaching strategies demonstrated that the child-led strategy resulted in a greater improvement in gaze, turn-taking, object use and joint attention when compared to the adult-led approach (Lewy and Dawson, 1992).

The Intensive Interaction practitioner holds back with their behav-iour in order to let the other person largely lead the experience with their behaviour. Initiation of communication has been found to be a significant aspect of early communication learning by other researchers. Koegel et al. (1999) found that increasing initiating communication skills with children with ASD has a positive influ-ence on other areas of communication. This is supported by the research of the National Research Council (2001) which suggests that interactive styles of teaching which offer initiation of communica-tion activities have more beneficial long-term effects on the progress of children with ASD. From an Intensive Interaction practitioner's viewpoint, it is gratifying to take part in something which allows a

realisation on the learners behalf that they are in charge and can influence the whole procedure. I find that this 'eureka' moment is often the drive behind subsequent sessions, and motivates the learner into further interactions

Intensive Interaction has a positive history of viewing stereotypical behaviours as having potentially communicative functions. This standpoint is further endorsed by the work of Durand and Merges (2001, cited in Smidt et al., 2007) and Nind and Kellet (2002). By joining in with these behaviours (as is the case in Intensive Interaction) we are communicating about the individual's choice of activity. It is plausible that the introduction of Intensive Interaction makes a positive contribution towards the students developing alternative behavioural repertoires. Barber (2007), who suggests that the imitation of stereotyped behaviours forms a 'common ground' for communication and interaction, also supports this viewpoint. An alternative view is that as the individual becomes more confident in communication and social interaction, and uses a wider range of skills in these areas, so people begin to respond in a more positive way, therefore increasing the likelihood of positive interactions, and reducing the incidences of challenging behaviours (Hewett, 1996).

The processes of a typical Intensive interaction activity can be seen to be supportive for and sensitive to learners who may be experiencing extreme anxiety and/or social confusion as a norm of everyday life. There are some key features which establish this: the child-led, child-centred principle, the preparedness of the teacher to be responsive and to pause in order to allow the learner to be in the lead, and the core issue of the flow of the activity developing from the responsiveness of the teacher to the actions of the learner. The lack of a required or specified outcome, or 'tasklessness' (Nind and Hewett, 1994) of the teacher within these activities, results in a relaxed and undemanding communicative exchange, which, in my experience, must inevitably contribute to a lowering of anxiety for the learner. Within my own practice of Intensive Interaction I have noted the impact on the learner of 'tasklessness'. That sudden fear of being required to do something disappears, and the interactive exchange flows without interruption or trepidation.

Central too then, surely, is the 'tuned-inness' of the teacher to all feedback from the learner throughout the flow of the activity. This is emphasised in all Intensive Interaction literature (for example, see Nind and Hewett 1994, 2005; Nind and Powell, 2000). This central operational principle would seem to do two highly beneficial

things. First, it ensures that the sensibilities of the person with ASD are taken fully into account during every passing moment. Thus, all things being equal, the learner is receiving a customised, synchronised and fully sensitised communication experience moment by moment – the 'good fit' between the teacher's input and the learner's needs (Hewett and Nind, 1998). Secondly, the often idiosyncratic behaviour of the learner is read and used communicatively, as a result of the highly tuned-in, sensitive approach being utilised by the teacher.

There is also the manner in which the continuous process of dynamic activities furnishes the learner with rich, naturalistic, structured and repetitive learning opportunities to hone and enhance these understandings and performances (Hewett, this volume, Chapter 9; Hewett and Nind, 1998). The complexity of, for instance, non-verbal communication learning seems to demand a social ecology that is flexible, supportive and, yes, dynamic and repetitive. This repetitiveness is also a major component of the structure – a feature of activities that is so frequently held to be vital for people with ASD.

However, it is also worth noting that while the processes within Intensive Interaction can be predictable and repetitive, this is not always the case. The development and expansion of the learning attainments can result in more complex and unexpected activities. In many ways Intensive Interaction can almost take the form of a 'trial and error' approach, as both partners within the interaction become more confident and explorative. Some of the most exciting and successful-seeming interactions I have taken part in have been the result of an unanticipated alteration within a familiar interactive repertoire. Perhaps the security of these familiar activities allows change and adaptation to be less threatening, thus enabling greater exploration of social and communicative skills.

The intricate relationship between the FOC and the triad of impairments, therefore, is one which can be analysed, explored and ultimately, in my opinion, justified in terms of the impact of Intensive Interaction activities upon the social and communication difficulties within ASD. The impact of this within the field of special education should be more acutely realised than it currently is. For whatever reason, while the developmental, learner-led ethos of Intensive Interaction is frequently lauded, it often does not seem to translate into general practice in services. In particular, the domain of ASD specific approaches has seemed more reticent to embrace the development of communication within this type of naturalistic framework.

Resolution

Part of my motivation for writing this paper is to address the gap between commonplace practice in the field of ASD and the outcomes of studies such as the already cited National Research Council, (2001). They indicate that approaches for teaching skills in social communication and interaction which are naturalistic, developmentally appropriate and child-led have the most success in regards to development in these areas (Charman, 2010; Greenspan and Wieder, 1997).

I would not claim that this chapter makes points that are in any way revelatory. However, the nature of what seems to be common practice and approaches suggest that these points still need to be stated clearly in such opportunities as this volume. This orientation to a naturalistic model based on developmental appropriateness was richly argued as far back as 1986 (Dawson and Galpert, 1986), and has continued to feature in special education literature (Charman, 2010; Greenspan and Wieder, 1997; Klinger and Dawson, 1992 – cited in The National Research Council, 2001; Koegel et al., 1998). The nature of Intensive Interaction ensures that these attainments are repeatedly practiced and consolidated in a naturalistic way, and the myriad of learning experiences which take place within these sessions cannot be measured quantitatively.

However, much of the current practice in the field of autism-specific approaches seems to focus on a rigid, highly structured way of teaching and assessing very these complex, sophisticated and, at times, surprisingly diverse skills. Furthermore, many of the current approaches Treatment and Education of Austic and Related Communication-handicapped Children (TEACCH), Checklist for Autism in Toddlers (CHAT) and Picture Exchange Communication System (PECS) do not even appear to address the social communication difficulties, focusing instead on functional communication skills. The danger lies in trying to quantify and formalise these social communication attainments into a check list or regulated set of skills to be worked through. The learning of social communication skills is too intricate to be broken down in this manner.

For me, one of the most startling outcomes of using Intensive Interaction with learners with ASD has been the consolidation and extension of these attainments. I could never have predicted the ways in which my students began to adapt and broaden their learning to other situations, people and even, in some cases, each other. I think this demonstrates the richness of the learning process within

Intensive Interaction, and also the peril of trying to formalise these learning outcomes. If we cannot predict the effects of the development of social and communicative competency, how can we accurately quantify it?

Above all, Intensive Interaction allows the development of the messy, jumbled and unique process of learning to communicate and socialise, without placing demands or restrictions upon the learners. Surely this is the best possible way to foster the development of something as unique, complex and ultimately vital, as the ability to communicate and socialise with those around us.

Enabling the exploration and development of the fundamentals of social communication in a relaxed, pleasurable and responsive manner, is possibly the most precious experience we, as educators, can give to the young people with whom we work. The challenge is to recognise, facilitate and value these essential moments of interaction, through the creation of a culture and ethos of communication, in which Intensive Interaction is a fundamental component.

☐ Summary

I have attempted to highlight and explore the key relationship between the triad of impairments and Intensive Interaction. My intention has been to emphasise the importance of using Intensive Interaction to develop attainments which we know can be lacking in individuals with ASD, and highlight the potential facility of this approach for addressing those needs. More importantly, I hope to have addressed the significance of teaching and learning these things, especially for people who are often considered as incapable or uninterested in social interaction. Just because someone does not socially communicate in a traditional manner, it does not indicate that social interaction is unwelcome or unwanted. *Our* skills should lie in our ability to interpret and act upon these behaviours in order to enable social interaction to take place meaningfully.

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