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SHORT REPORT

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

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Intensive Interaction was introduced to a special developmental school in Melbourne, Australia. The school had previously used behavioural and skills-based teaching approaches to underpin the teaching of students with severe/profound intellectual disabilities and autistic spectrum disorders. Video baselines of students involved in classroom interactions were taken before introducing the approach of Intensive Interaction to the school. Following a 30-week period during which the approach was practised routinely in classrooms, further video records were made. These video records enabled comparison to be made against five indicators of student involvement. Professional development using video techniques and structured reflection was initiated with all involved staff. Increases in the student's joint focus, positive affect and interactive involvement were noted. In addition to changes in the communicative involvement of the pupils, the practitioner's communicative involvement was also noted to change.

Keywords: profound intellectual disability; autistic spectrum disorder; Intensive Interaction; communication; special education

In October 2003, a pilot study into the use and effectiveness of Intensive Interaction was initiated at Bayside Special Developmental School, Melbourne, Australia. While this approach is used extensively in schools in the UK, this was the first time it had been reported in an Australian context. At the time of the study, the Victorian curriculum was based on 'key learning areas' and was largely used as a skills hierarchy to enable A–E reporting on levels competency against stated goals. The use of Intensive Interaction was therefore considered to be counter-cultural for many practitioners. This paper describes the processes that led to the approach being adopted in the existing school culture and presents data collected.

Intensive Interaction

Intensive Interaction is a 'socially interactive approach to developing the preverbal communication and sociability of people with severe or profound intellectual disabilities' (Firth et al. 2008). The approach has been found to be of benefit across a wide variety of settings (e.g., Irving 2001; Samuel 2003; Kellett 2000, 2004) in which services are provided for individuals who appear to be 'hard to reach' or have 'not yet learned the fundamentals of early social communication' (Kellett 2004, 12). It is used as a means of developing

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interaction skills in people who are typically very withdrawn or who spend large amounts of time in ritualised, self-oriented behaviours (Caldwell 2003).

The approach involves the practitioner supporting the learner to 'play with' and explore the reciprocal conventions that underpin communication. Practitioners allow the ebb and flow of an interaction to be directed by the learner during open-ended, agenda-free encounters or social exchanges. Responding to whatever it is that appears to have meaning for the learner, the practitioner's contribution to emerging dialogues employs behaviours which the learner recognises as their own. Practitioners employ the principle that it is not the flexibility of the learner's skills which enables them to be meaningfully involved in a social interaction, but the flexibility of environment in which they interact (Barber 2002), or person with whom they interact. The practitioner's role, then, is to respond to the learner's behaviour in a manner which supports successful, enjoyable social involvement. No matter how idiosyncratic the learner's behaviour might be, it is accepted as 'having the potential for interaction' (Nind and Powell 2000). The principles which underpin Nind and Hewett's approach, as well as resources to inform practitioners, are to be found in a number of specific publications (Hewett and Nind 1998; Nind and Hewett 1994, 2001; Barber 2007).

The great majority of peer-reviewed publications reporting on Intensive Interaction have been limited, like this project, to consider small numbers of participants (Irvine 2001; Elgie and Maguire 2001; Forster and Taylor 2006). However, several meaningful benefits have been reported following the adoption of the approach, including gains in communication, sociability and in the ability both to initiate and maintain social contact (Nind 1996). Indications of increased signs of positive affect, as well as increased independence, social well-being and choice making have been recorded, in addition to 'reductions in some behaviours which were previously seen to challenge services' (Irvine 2001). However, while results 'suggest that the approach is effective in developing very early stages of interaction', there is as Goldbart (2006) suggests, 'still a considerable need for further evaluation'. This project contributes to the evaluation process.

Bayside Special Developmental School, Victoria

Bayside Special Developmental School, Moorabbin, Victoria, Australia, has a roll of 80 students with intellectual disabilities ranging from moderate to profound, between the ages of 2–18 years. Class sizes range from four to eight pupils per two staff members (i.e., teacher and unqualified support worker).

Initial staff training

All staff were involved in a 10-session programme of training at after-school seminars. These seminars outlined the principles, characteristics and key features of the approach. Following this training, 11 pupils were initially identified as demonstrating combinations of apparent social isolation and pre-intentional or emerging intentional communication. Criteria used to inform this process of selection referred to those described in Grove et al. (1999):

- a high dependency on the interpretation of others to make themselves understood;
- a level of awareness of their own intentions which is low, or difficult to determine;
- a level of comprehension which is low or difficult to determine;
- very limited or inconsistent ways of communicating;
- social isolation or large amounts of time spent involved in ritualised, self-oriented behaviours.

Baseline period (12 weeks)

During the baseline period, the author attended the school on a 4 hours per week basis in the capacity of teacher-mentor and also to record video footage. Consent was sought and given by parents for their children's involvement in the initiative before the project began. The three teachers and the five support workers directly involved were assisted to carry out observations to recognise the participants' self-directed 'centre of interest' or characteristic 'attentional focus' during class routines. The apparently positive responses to particular events were noted, along with characteristics of the participants' self-directed, ritually organised behaviours. These observations helped practitioners to consider how they might identify rhythms or patterns of activity which they would be able to use themselves to respond interactively, or imitate to 'advertise' their presence.

Video baselines

A series of video records were made comprising:

- six video sequences of at least 5 minutes' length showing the individual student involved in group activities (often peripherally);
- six video sequences of at least 5-minutes' length showing the individual student involved in 'individual teaching sessions'.

Video recordings were made of several other pupils who had been identified as the Intensive Interaction cohort, so that the identities of those being specifically rated would remain anonymous to the practitioners involved. Note that difficulties in the evaluation of the 'group activity' videos (e.g., identifying the focus of students' attention) resulted in this data being discarded.

Intervention

During this 30-week period, classroom staff interacted with the participants along Intensive Interaction principles, rather than the previously used, objectives-focused and largely task-centred teaching. These interactions took place during timetabled periods of 'downtime' during the class day, as well as informally, when students appeared to initiate or show interest in the close proximity of a staff member. Interactions were thus, not outcome-focused, but capitalised on the attentional lead of the pupils' interest. Staff used their observational records to construct the type of social advances which appeared to result in increased social interest or positive affect. In addition, they imitated the frequently observed cycles of repetitive behaviour characteristic of each learner when it occurred nearby. When no characteristic patterns of activity were observed in the learner, or when they appeared sentient, staff themselves used the behaviours nearby to 'intrigue' (Forster and Taylor 2006) the learner into becoming involved in mutually responsive encounters (Caldwell 2003).

Staff development (intervention period)

The intervention phase also represented a period during which the 'core group' of staff members met collectively to discuss and reflect on their practice. Reflection was assisted by using 'start/stop' video techniques to analyse interactions: this process involved playing approximately 2 minutes of footage before pausing the video, to reflect on what was

occurring at conceptual as well as interactive levels. Activities involved looking for the focus of the pupils' attention and reflecting how practitioners might respond to this more communicatively; considering whether the teacher was allowing their own agendas to lead the interaction and also suggesting what the practitioner might have done differently, or how they might respond in future interactions. This process evolved into further and additional 'hypothetical' discussions and 'what if …' scenarios.

This use of video footage enabled practitioners to reflect on how the encounters progressed with the benefit of hindsight, as well as to consider the encounter from both the learner's and teacher's perspectives. This enabled practitioners to consider how to synchronise themselves with the rhythms and pauses that the students demonstrated. Crucially, staff members from other classes were able to observe each other and gain insight into how they might interact with those pupils when opportunities arose in outside play periods or in encounters about the school.

Within the meeting cycle, methods of recording interactions were discussed making close reference to the 'performance levels' contained in the Qualifications and Curriculum Authority's (QCA 1999) document *Planning, teaching and assessing the curriculum for pupils with learning difficulties* and the 'Framework for recognising attainment'. This process led to the development of a series of recording formats, which in turn began to assist the evolution of a language to describe features of interactions. Recording formats were found to assist professional reflection, enable practitioners to record newly emerging interactive game patterns and to inform future interactions.

Evaluation

Following 30 weeks of Intensive Interaction, the approach had become increasingly more established in the daily routines of the classroom. Interactions also occurred informally when opportunities were seized during recess, care tasks and lulls in the school day. A second set of video sequences were recorded during classroom sessions in settings which matched the baseline recordings. During filming, practitioners continued to respond communicatively to the learners' idiosyncratic behaviours and to any apparent suggestions or initiations which were associated with the increasingly established interactive 'dialogues' or 'games'.

The data

Each video sequence was 6–15 minutes' duration. Both sets of videos were rated on a second-by-second basis, noting the occurrence of interactive and communicative behaviours which corresponded to the 'Indicators of Involvement' (adapted from Kellett and Nind 2003). Three of these five indicators relate solely to the behaviours demonstrated by the learner and are unambiguous ('smile', 'look at communicative partner's face' and 'socially directive physical contact'). Where there was ambiguity, videos were also rated by the involved staff to verify or contradict the author's interpretation. Indicators were only credited when the interpretations of both observers were in accord. Second-by-second data relating to the 'Indicators of Involvement' were taken from the video footage and cumulative times relating to indicators were expressed as a percentage of the total length of the observed period of interaction.

The data presented relate to three learners: M, A and J. The graphs in Figures 1–5 depict data from a total of 12 or 14 video sequences for each student, each showing data for one particular indicator of involvement for the three participants. The graphs map and compare
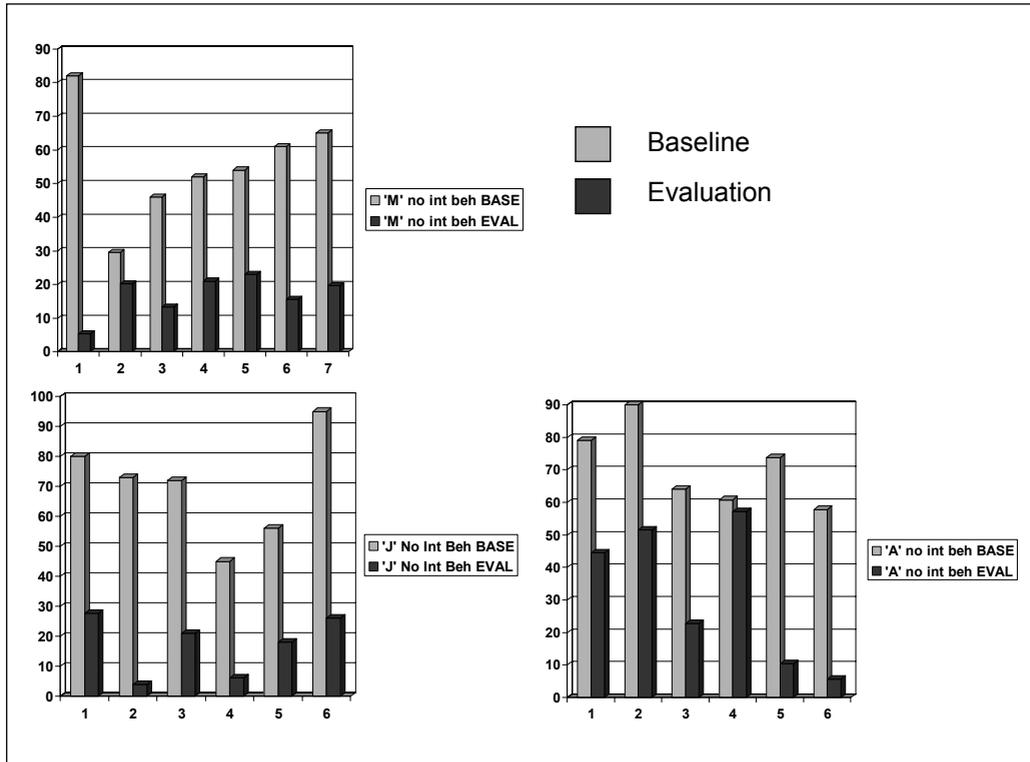
Figure 1.   Indicator of involvement: 'No interactive behaviours'.

data taken during the baseline period and the evaluation period. Evaluation began 12 months after the baseline commenced. The practitioners who worked with the students remained constant during the whole study as did the pupils in the class groups. Note that in the figures the light columns represent data collected during baseline, while the dark columns represent data taken following intervention.

The 'Indicators of Involvement' (adapted from Kellett and Nind 2003)

- *'No interactive behaviours'*

There are apparently no interactive behaviours being demonstrated by learner towards practitioner (i.e., no interaction, gaze, reaching, interest or monitoring).

- *'Look at face'*

The learner's gaze settles/fixates on the practitioner.

- *'Smile'*

The learner smiles (although not necessarily because of an external event).

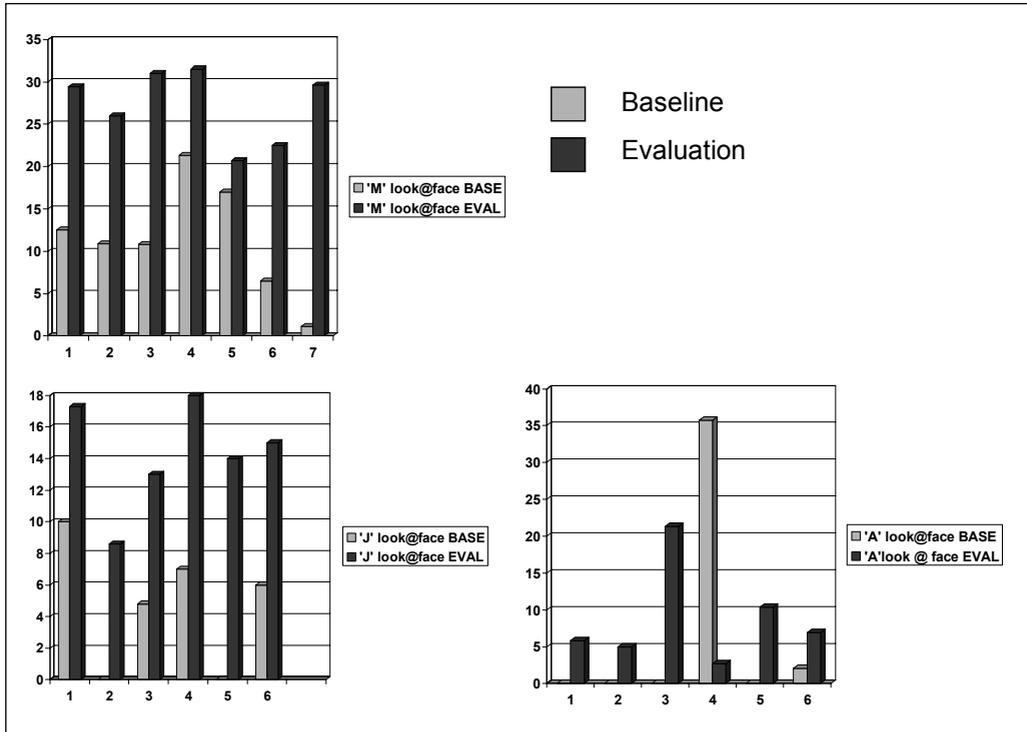- *'Socially directed physical contact'*

Figure 2.   Indicator of involvement: 'Look at communicative partner's face'.

The learner initiates physical contact, continuing the touch contact and directing a physical dialogue (e.g., the learner clapping the practitioner's hand(s) and maintaining their hand position in anticipation of repetition; reaching for or playfully moving the practitioner's arm; touching the practitioner's jaw to feel vibration, etc.).

- *'Engaged'*

The learner is engrossed or absorbed in a mutual activity, focus, exchange or dialogue.

Discussion

While it is clearly dangerous to draw firm conclusions from so few data points, simple comparison of what data there are, appears to reflect noticeable changes in the social behaviour of the three students. These indications were supported by anecdotal evidence from the practitioners working with them, who commented on perceived increases in attentiveness and what they described as 'trust'.

Decreases in the percentages of time in which there were *no interactive behaviours* occurring between pupil and teacher (Figure 1), may be argued to reflect differences in the level of pupil involvement between:

(1) conventional (individual) teaching encounters, where the teacher's behaviour might predominantly involve
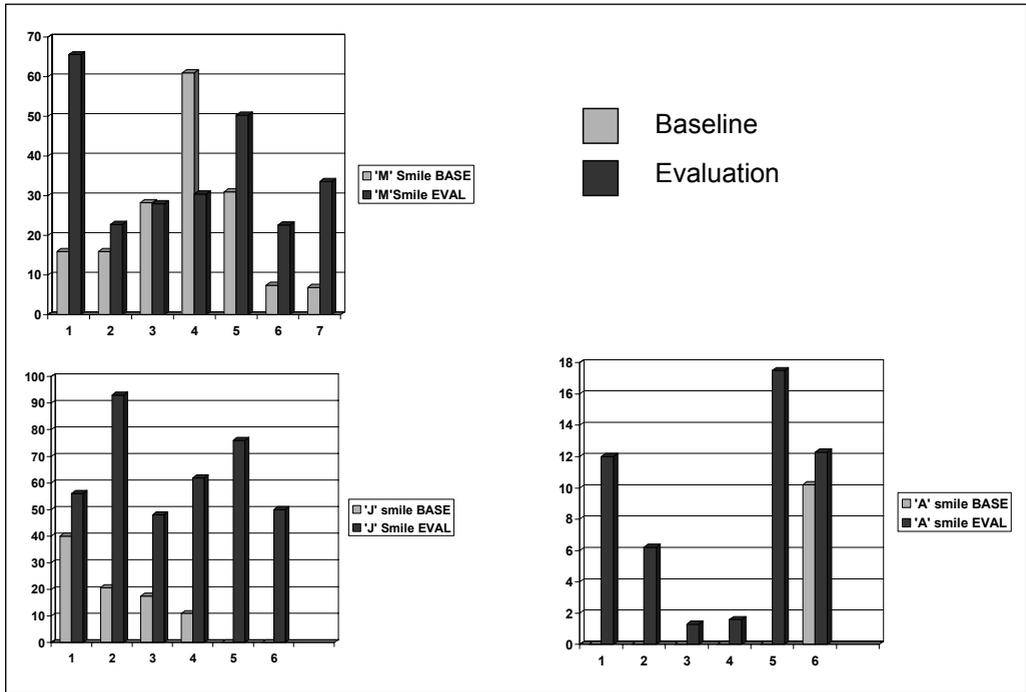
Figure 3.   Indicator of involvement: 'Smile'.

   – actively inviting or prompting responses, while
   – responding to initiations that might be recognisable in conventional interactions, e.g., a prescribed social attempt, or a vocalisation (e.g., Ware and Healey 1994), around a focus which is established by the teacher; and
(2) the more responsive style of interaction characteristic of Intensive Interaction, in which the teacher responds to potentially communicative acts and to the idiosyncratic behaviours demonstrated by the learner. These mutually adaptive dialogues may have interchangeable or no fixed focus and indeed, no predictable outcome.

Within the approach, the practitioner is encouraged to respond interactively to repetitious or ritualised cycles of behaviour (Hewett and Nind 1998; Caldwell 2003), as well as to more conventional or traditionally 'acceptable' behaviours. Additionally, interactions are shaped by the attentional focus of the learner, rather than on the outcome requirements of the teaching session.

   Figures 2–5 illustrate four aspects of the make-up of this contended increase in social involvement; data for the condition 'Socially directive physical contact' are presented in Figure 4. This illustrates the greatly increased acceptance and indeed initiation of close physical proximity which was also noted by practitioners. Practitioners reported that their records showed incidents of touch being used by learners in what were interpreted as social invitations, by all three students. 'Social games' of prolonged touch emerged, during which pupils became engaged in 'physical dialogues' involving turn taking and patterns of touch. Additionally, practitioners mentioned that Student J, in particular, was now using touch as a strategy to apparently indicate the desire for the continuation of an encounter following a pause in activity. It was also commented that the level of touch now routinely used by
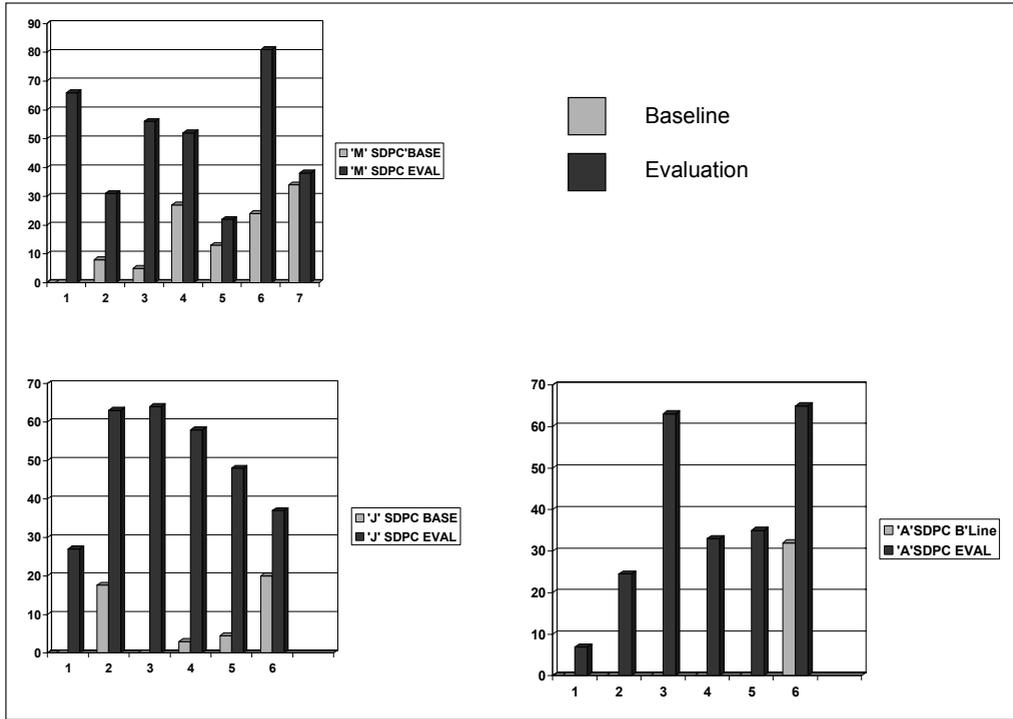
Figure 4.   Indicator of involvement: 'Socially directive physical contact'.
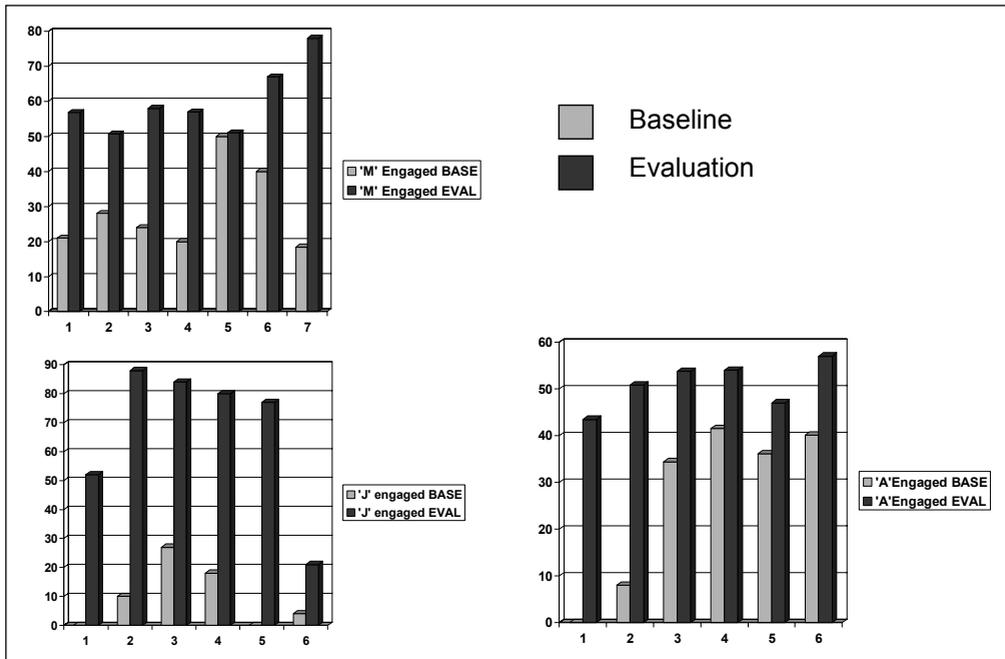

Figure 5.   Indicator of involvement: 'Engaged'.

Student A had risen almost simultaneously with the support worker's demonstration of her interest in spinning saucers.

Figures 2–4 demonstrate the increase in the social interest of the learner, which is focused on the presence and actions of the teacher. It might be suggested that these increases may be due to the increased range of 'conversational topics' which the practitioner responded to and accepted as the basis for interaction. The extended interaction time and apparently increased communicative involvement is argued to result from the increased communicative interest demonstrated by *both* partners. This would account for the decrease in percentage scores relating to 'no interactive behaviours' (Figure 1).

It was noted with great interest that each of the learners, who have autistic spectrum disorder diagnoses, were clearly using social behaviours to engage teachers and staff for open-ended and purely social purposes. Initiations for content-free social interaction or to share joint attention and activity, featured prominently rather than those to regulate the adult's behaviour to achieve finite results. Other indicated changes included increases in the occurrence of signs of positive affect and apparent increases in the periods that pupils gazed intently at practitioners. This was especially apparent in Student A, whose use of gaze became more settled and was less specifically linked to anxiety in close-proximity teaching sessions.

It was difficult to extrapolate whether periods of engagement (Figure 5) had increased because of students' increased interest and interaction with teachers, or the more responsive and attentive style of communication adopted by teachers. It is a central tenet of the approach that the skilled communicative partner needs to attend a broader spectrum of student behaviours than their responses, if they are to interpret the learners' agenda.

Conclusion

While conceding the limitations of the data, this report does appear to give support for the contention that using Intensive Interaction to shape and inform teaching practices enables learners with severe/profound intellectual disabilities and autistic spectrum disorders to express their sociability more effectively and recognisably. Possibly more important, however, is the change in the practitioner's contribution to successful interaction and communicative involvement. Conventional outcome-focused teaching approaches limit the 'palette' of acceptable communicative behaviours to 'that which the practitioner is prepared to acknowledge'. The desired teaching outcome being focused on frequently influences the content and boundaries of teacher–student interactions. Using Intensive Interaction, communicative exchanges are not focused on a specific or desired outcome, but follow the learner's pace and style of operating. Communication is considered to be mutually adaptive and responsive, while the success of an interaction is seen in terms of quality of involvement rather than outcome.

This study provides evidence to suggest that when the learner's idiosyncratic behaviours are interpreted as having potential for interaction (Nind and Powell 2000) and practitioners respond to the manner in which the individual learner expresses themselves, rather than define what communication should look like, more positive, successful and interactive social involvement is liable to occur.

Acknowledgement

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