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# Structured Teaching for Pupils with Autistic Spectrum Disorders: Meaningful or Meaningless?

**Pupils with autistic spectrum disorders (ASDs) face many challenges in the classroom, including difficulties extracting and interpreting meaning. Structured Teaching is often recommended as a strategy for enhancing meaning for pupils with ASDs. However, frequently the approach is misused with rigid adherence to structure that may limit progression in key areas of learning. This paper reflects upon the key principles that underpin Structured Teaching. It is argued that teachers who understand and implement the principles of the approach are more likely to be successful in enhancing meaning in the classroom for pupils with ASDs.**

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## INTRODUCTION

The often complex individual needs of pupils with ASDs reflect differences in thinking and behaviour arising from the 'triad of impairments' first identified by Wing and Gould (1979). These include challenges to social communication, social interaction and flexibility in thinking and behaviour. In addition to the widely accepted differences in these key areas, unusual sensory experiences are reported, including hypersensitivity and hyposensitivity in any of the senses. Individuals may also experience challenges in a number of other areas that will impact upon their ability to learn, for example poor short term memory, selective attention, organisational difficulties, problems with understanding sequences and so on (Mesibov, Adams and Klinger, 1997; Mesibov and Howley, 2003). The resultant individual needs of pupils with ASDs affect the ways in which they learn and how they access information. Different cognitive processes, as described for example by Frith (1989) and Frith and Happe (1994), may lead to different ways of thinking and possibly different interpretation of information. Thus many pupils face specific challenges in classrooms resulting in 'special learning needs' (Jordan and Powell, 1990) and experiencing difficulties with understanding and using 'meaning'

(Powell, 2000). A useful question to ask when consequent unusual and challenging behaviours arise in the classroom is “Does he know what we mean”? Invariably the answer to this question is “No”. The paper considers potential problems with meaning in the classroom for pupils with ASDs and explores the use of Structured Teaching as one strategy for enhancing meaning. It will be argued that the paraphernalia often associated with the approach should be replaced with an understanding of the key principles, as it is this set of principles that may lead to more meaningful understanding and more effective teaching and learning.

## PROBLEMS WITH MEANING

“Central to the way in which most of us perceive, and act upon, the world around us is our inclination to make meaning of that world” (Powell, 2000, p. 2). However, making sense of meaning can be problematic for people with ASDs. Peeters (1997) and Powell (2000) discuss the impactions of lack of use of meaning, identifying potential problems including reliance on rote memory and difficulties with prediction, making connections and categorisation. Frith (1989) articulates problems with extracting meaning, linking this to weak central coherence which allows us to “easily single out meaningful from meaningless material” (p. 101). The notion of ‘detailed thinkers’ (DeClerq, 2003) also helps to explain, through various illustrative examples, the lack of understanding of meaning in individuals with ASDs.

The implications of lack of understanding of meaning in the classroom are significant; pupils with ASDs will experience teaching and learning very differently from other pupils, often struggling to understand what we mean. To compound this, lack of an ‘experiencing self’ (Powell, 2000), together with poor executive functioning (Ozonoff, 1995**)**, may mean that individuals struggle to meaningfully organise their experiences. This may lead to efforts to try to make sense of meaningless information with failure to do so resulting in high levels of anxiety, challenging behaviour and consequently adherence to, and reliance upon, rigid routines. Powell (2000) argues that the different thinking styles of people with ASDs have implications in the classroom where traditional

(often language and socially based) teaching strategies are the norm. This focus upon lack of meaning is highly pertinent as “education is concerned with the communication of meaning…” (p. 10). Education for pupils with ASDs ought therefore to address potential problems with meaning and introduce strategies for enhancing meaning in the classroom. One such approach is ‘Structured Teaching’.

## RATIONALE AND PRINCIPLES OF STRUCTURED TEACHING

Structured Teaching is a major component of the approaches devised as part of the ‘Treatment and Education for Autistic and related Communication handicapped CHildren’ (TEACCH). Division TEACCH, based at the University of North Carolina at Chapel Hill, has developed the approach for teaching individuals with ASDs. Structured Teaching is underpinned by knowledge and understanding of the nature of ASDs and the individual learning needs that consequently arise. Mesibov and Howley (2003, p.14) suggest that the approach “evolved as a way of matching educational practices to the different ways that people with ASD understand, think, and learn”. The approach makes considerable use of visual information to enhance meaning, based upon the premise that many individual with ASDs are ‘visual learners’. As Grandin (1995) for example explains, ‘I think in pictures. Words are like a second language to me… When somebody speaks to me, his words are instantly translated into pictures” (p. 19). The visual component of Structured Teaching is utilised to add meaning to language and to help pupils to ‘see’ the meaning of classroom activities. If the approach is used to enhance meaning for the pupil, teaching and learning will be more successful and enjoyable.

However, sadly the approach is often associated with various paraphernalia and is used in misguided ways; this may lead to rigid use of structure, lack of progress and limited opportunities for developing communication and thinking skills. The focus of the approach should lie not with paraphernalia but with the key principles (Table 1) that underpin the approach. Such an approach may then lead to greater autonomy and independence, rather than rigidity, and should enable individuals to understand the meaning of their experiences in the classroom.

TABLE 1 HERE

The principles of the approach lead to structure that is developed for the individual to promote flexibility, improve communication and interaction and increase opportunities for developing key skills such as thinking and problem solving skills. When Structured Teaching strategies are used, underpinned by an understanding of the key principles, the meaning of classroom activities is enhanced. Structured Teaching comprises four elements of structure, each of which can add meaning to the learning experience.

## PHYSICAL STRUCTURE

The two main feature of physical structure are concerned with clarifying the purpose of space within a classroom and reducing potential distractions. Some individuals with ASDs have difficulties understanding the meaning of the physical classroom space, perhaps failing to extract meaning from the 'bigger picture', leading to lack of understanding of the purposes of different areas within the classroom. Weak central coherence (Frith, 1989) may also mean that the individual fails to identify relevant information within the classroom and becomes distracted by irrelevant information (including sensory information). Observable behaviours often reveal the confusion the individual may experience in relation to this aspect.

Physical structure will vary significantly according to individual needs. For example, aimless wandering or running around the classroom may indicate lack of understanding of the purpose of space. Physical structure can be developed for the individual, for example by re-organising the classroom to visually clarify different areas and their purposes. This might be achieved by using furniture to demarcate areas for specific activities or different floor surfaces to distinguish between areas. A pupil who is easily distracted by (sensory) information may need a quiet workspace with few distractions. Other individuals will not require the same high level of physical structure but may benefit from more 'subtle' structure. For example, a desk mat may be used to visually

define working space on a shared table to enable a pupil to share working space with a peer; display distractions can be reduced – for example, for the pupil who is distracted by numbers, a wall displayed number line can be covered during lessons where this is irrelevant, allowing the pupil to focus upon what is relevant to the lesson.

The rationale for considering physical structure is that any issues that arise within the physical learning environment for the individual should be addressed in order to promote greater understanding and to reduce distractions and anxiety. If we are to enhance meaning for pupils with ASDs, the physical structure is often the starting point as lack of understanding of space, together with (potentially stressful) distractions will increase anxiety, reduce understanding and limit access to teaching activities. Addressing the physical structure should lead to greater independence and reduce anxieties – we can then progress to developing other strategies to facilitate teaching and learning. It is worth noting that many of the changes that may be helpful for pupils with ASDs will also benefit others in the class, as for example with the introduction of a quieter working area (DfES, 2001).

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SCHEDULES

Visual schedules provide information for pupils about the sequence of activities and passing of time; they provide essential information, in an accessible format, about what, where, and when. Failure to understand the 'order of the day' or class timetable can lead to seemingly meaningless, chaotic activities and may lead to resistance and rigidity. Visual schedules bring meaning to this 'chaos'. As with physical structure, visual schedules will vary according to individual needs, thus assessment is essential and individualisation is critical. For example, a 'first…, then…' visual sequence, presented with objects, photographs, pictures, icons or words, helps the individual to understand the sequence of activities and is a crucial first step in developing an understanding of the meaning of classroom activities. Once a pupil knows what we mean, e.g., first story time, then dinosaurs, he may become less anxious and begin to access an increasing range of learning opportunities. For pupils who can cope with more information, longer schedules

can convey meaning in relation to the sequence of activities for the morning or the day. Schedules can be developed further and include greater detail for some pupils by, for example, including information about working with others, changes to the timetable, opportunities for making choices, negotiating activities and making decisions (Mesibov and Howley, 2003).

## WORK SYSTEMS

Poor executive functioning (Ozonoff, 1995) may well cause problems for pupils with ASDs with organisation, sequencing, setting goals and planning. Individuals may become overwhelmed due to lack of organisational skills, rather than lack of ability to complete a set task. The work system provides organisational strategies for individuals, allowing them to 'see' what to do and in what order, ultimately reducing anxiety. The organisational demands on the individuals are reduced, allowing them to focus on the lesson concept or activity. Just as schedules bring meaning to a chaotic day, so the work system brings meaning to how to complete activities by providing information about what is to be done, how and in what order. The work system should also provide a means for pupils to self-check on their progress and to be confident about what to do when the lesson or activity is finished.

Work systems will vary according to needs, thus assessment again is central to how to develop an appropriate system. For example a basic left to right system (Schopler, Mesibov and Hearsey, 1995; Mesibov and Howley, 2003) may be necessary for the pupil who requires high levels of physical structure; other pupils will be able to use matching systems, sequenced 'to do' lists and written organisation strategies. Many pupils with ASDs benefit from using these systems during independent working, but they can also be incorporated into group lessons (Mesibov and Howley, 2003).

## VISUAL STRUCTURE

The final element of Structured Teaching incorporates various visual strategies to add

meaning to lessons, activities and tasks. Visual clarity, organisation and instructions are all utilised to enhance meaning (Schopler et al. 1995). Mesibov and Howley (2003) provide many examples of how such structure may be used to clarify meaning of often language-based instructions and explanations, suggesting that these elements of structure can provide a useful differentiation strategy. Strategies might include picture or icon sequences of instructions, prepared topic vocabularies, visual cue cards, written reminders and so on.

Visual structure can be used to develop thinking, decision making and problem solving skills (Mesibov and Howley, 2003). The range of strategies that could be used is endless – the key again is to assess individual needs and provide instructions and information in an accessible way. A useful question to ask when planning lessons and considering differentiation is 'How will he see what I mean'? Visual supports and cues can then be incorporated into regular planning and will almost certainly be of use to other pupils in a class.

## CONCLUSION

The different ways in which individuals with ASDs perceive and understand the world may result in a lack of understanding of the meaning of classroom activities. Structured Teaching is one strategy that may enable individuals to extract meaning from a seemingly meaningless situation or activity. The approach is flexible, manageable in the classroom and responds to diverse learning needs. In addition, Structured Teaching can also be used to complement and enhance other strategies that also focus on developing an understanding of meaning, for example Social Stories (Howley and Arnold, 2005).

However, lack of assessment of needs, lack of individualisation and misunderstanding of the principles often leads to misguided use of the approach, rendering it meaningless. For example, in a class of six children who all have an ASD it is highly unlikely that they will all be at similar levels of visual cognition, yet frequently such classrooms provide identical icon schedules for each child. Equally, the teacher in an inclusive mainstream

classroom may use a class timetable or written order of the day, not providing the individual version that the pupil with ASD requires.

The principles of Structured Teaching are central to the approach and underpin potential outcomes for the individual. The focus of the approach must be to assess needs in order to develop appropriate structure that adds meaning to all aspects of learning. As Powell (2000) suggest
s, "When things are presented to us meaningfully they are easier to understand and remember than when they are presented meaninglessly" (p. 2). The principles of Structured Teaching provide one effective strategy for presenting information in a meaningful way to pupils with ASDs, enabling more effective teaching and learning.

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