Autism: Considerations for the Future Education of Children with Autism in Mainstream Schools: Experiences from Research in Ireland

Emer Ring
*Mary Immaculate College, University of Limerick (Ireland)*
emer.ring@mic.ul.ie

Abstract

The quality agenda remains at the heart of global education discourse [1]. Including children with special educational needs in mainstream education provision is one of the key tenets of advanced education systems internationally. In particular the inclusion of children with autism presents particular challenges for education systems globally. The future inclusion of children with autism in mainstream education is dependant on the ability of schools to provide quality education for both children with autism and children who do not have autism in the same classroom [2]. In this paper, a theoretical framework for autism is linked to implications for school systems and teachers' practice in the classroom in providing quality education experiences for children with autism and their peers who do not have autism. This paper is based on research conducted by the author in ten schools in Ireland with forty-two children with autism, aged from three years and nine months to sixteen years and eight months with a range of additional needs ranging from mild to severe to profound general learning disabilities, language delay and challenging behaviour. Data from twenty individual semi-structured interviews with school principals and teachers of children with autism, ten focus-group interviews with other teachers in the schools, photographic classroom data and video-data comprising periods of classroom observation of twenty-six to fifty-four minutes were collected. Individual children's on-task behaviour was determined from the video data through a two-minute time-sampling process. Analysis of the data suggests that children's on-task behaviour is optimised when the following factors are a feature of practice: the physical layout, organisation and environmental stimuli of the classroom are addressed; teaching approaches and strategies consider the visual learning style of children with autism; a range of teaching approaches and strategies is used; the sensory and perceptual differences of children with autism are accommodated and classroom assistant support is effectively managed.

1. Introduction

Internationally, educational provision for children with autism has developed significantly since Hans Asperger 1979 [3] in Vienna and Leo Kanner 1943 [4] in the US began their pioneering work in the 1930s. In the past number of decades an abundance of psychological theories has emerged, which have endeavoured to definitively explain what autism is [5]. However Professor Rita Jordan, of the University of Birmingham observes, we have not as yet 'come near to any unifying explanation' [6]. The impact of sensory perception on how children with autism experience the world is now included in the most recent classification system for autism *The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition [DSM-V]* [7] as one of the potentially defining features of autism. Additionally, general learning disabilities and other special educational needs may co-exist with autism. The presence and interaction of the characteristics of autism and other co-existing needs affects the manner in which children interact with and understand the world and have associated implications for the planning, implementation and evaluation of learning and teaching programmes [5]. The manner in which autism is understood in *The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition [DSM-V]* is illustrated at Figure 1. below.
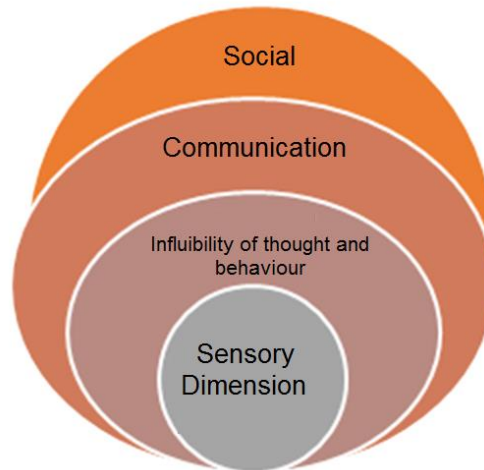
Fig. 1. Differences Experienced by Individuals with Autism: The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition [DSM-V]

In 2007, the Council of Europe [9] adopted a resolution on the education and social inclusion of children and young people with autism, which emphasised the need for co-ordinated action and coherent policies at national level. It also expressly stated that inclusion is dependent on the recognition that persons with autism present specific needs that are qualitatively different from other special educational needs and require specific understanding and approaches to meet them. It advocated that member states support wide-ranging early and accessible identification and diagnosis, individual assessment, public awareness and training for parents and the professionals concerned. Including children with autism in mainstream classroom has benefits for both children with autism and their peers who do not have autism. Findings from this research suggest a number of areas that can be addressed to facilitate the inclusion of children with autism in learning and teaching experiences with their peers.

2. Methodology

This research was conducted in ten schools in Ireland with forty-two children with autism, aged from three years and nine months to sixteen years and eight months with a range of additional needs ranging from mild to severe to profound general learning disabilities, language delay and challenging behaviour. Provision for children at pre-primary, primary and post-primary levels were examined. Children's on-task behaviour was analysed based on the premise that the on-task child is more likely to see and hear important instruction and the teacher is more likely to use instructional strategies associated with increased on task-behaviour [9]. Data from twenty individual semi-structured interviews with school principals and teachers of children with autism, ten focus-group interviews with other teachers in the school, photographic classroom data and video-data comprising periods of classroom observation of twenty-six to fifty-four minutes were collected. Individual children's on-task behaviour was determined from the video data through a two-minute time-sampling process. While a range of findings related to provision for children with autism emerged from the data, this paper focuses specifically on findings related to supporting children's on-task behaviour. Analysis of the data suggests that children's on-task behaviour in the classroom is optimised when a range of factors are a feature of practice and include addressing the physical layout, organisation and environmental stimuli of the classroom; adopting teaching approaches and strategies that consider the visual learning style of children with autism; directing attention to children's interest in, and engagement with the activity; and effectively managing classroom asssistant support.

3. Physical Layout, Organisation and Environmental Stimuli of the Classroom

The literature identifies the organisation of the physical environment as a significant factor that impacts on the engagement levels of children with autism [10]. Adapting the environment in order to compensate for differences related to social, communication and rigidity of thought and behaviour in addition to sensory and perceptual differences has been found to be of benefit for children with autism [11]. The findings from this research indicate that children's behavioural outcomes were compromised when due attention was not directed to the physical environment of the classroom and children's

perceptual and sensory differences, resources were not stored in an organised manner and the potential for distracters such as toys, books, objects of interest and material with which children demonstrated a tendency to engage in perserverative behaviours were not sufficiently considered. Malaguzzi has suggested that there are three teachers of children: adults, other children and the phsycial environment [14].
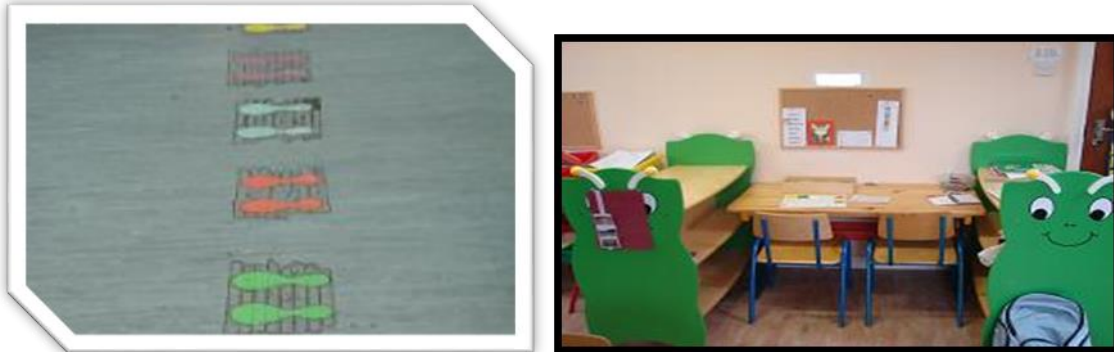
Fig. 2: Demonstrate the potential of the classroom environment as the 'third teacher' in providing classroom spaces that address the needs of children with autism for predictability and organisation.

4. Teaching Approaches and Strategies that Consider the Visual Learning Style of Children with Autism

As all children develop, they become less reliant on visual information for learning and teachers rely less on visual and more on verbal methods in their teaching. However for children with complex needs, the development of language, as a basis for organising, analysing and storing information is deficient, hence these children continue to rely more heavily on visual learning approaches [12]. The literature suggests that while the cognitively more able children with autism may appear to cope well, they will need visual support throughout their lives in order for them to fulfil their potential. This is confirmed by the views expressed by individuals with autism. Temple Grandin tells us that she thinks in pictures and that words are as a second language to her [13]. The research findings suggest that where teachers used teaching approaches and strategies that considered the visual learning style of children with autism such as visual schedules, children demonstrated high levels of engagement in classroom activities.

5. A Range of Teaching Approaches that Consider Children's Interest in and Engagement with the Activity

The provision of intrinsically appealing structured learning and teaching activities in which children demonstrated interest was observed to significantly increase children's responsivity and task engagement. These activities were augmented by the use of stimulating resources. Experiential resources that utilised photographs of children, family members and school staff were particularly effective. A range of toys related to construction, domestic utensils and furniture, cause and effect, jigsaws and games was used successfully to engage children's attention and maintain on-task behaviour. Clarity in the teaching process, positive teacher expectations, approaches and strategies linked to the Primary School Curriculum in Ireland and the use of rhymes songs and music were observed to impact positively on children's engagement. Elements of autism-specific approaches were observed and included the picture exchange communication system (PECS), the Treatment and Education of Autistic and related Communication-handicapped CHildren (TEACCH), intensive interaction and applied behaviour analsysis (ABA). No autism-specific intervention was used exclusively in the learning and teaching process.

6. Classroom Assistant Support is Effectively Managed.

While it is generally accepted that the provision of support staff has the potential to enhance the education of children with special educational needs, it is also clear that the mere presence of such staff does not automatically result in enhanced educational opportunities for children. Where this support was managed effectively children's on-task behaviour was observed to be positively impacted on. This support was observed to be effective where assistants had a clear understanding of their roles and responsibility, had a knowledge and understanding of autism, engaged in collaborative

practice with the class teacher, and maintained a balance between providing support and maintaining children's independence

7. Conclusion

The triad of impairments, sensory sensitives, congnitive functioning, other co-occurring special educational needs and personality characteristics impact differently on each child with autism. As encapsulated in the words of one teacher, like all children, children with autism are individuals: *"I don't think that anyone could ever fully understand autism because children are so unique. And I even with my qualifications am still finding out new things and learning".* However the research findings suggest that directing attention to the factors outlined above effectively supports and enhances the learning and teaching experiences of children with autism

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