

AUTISM AND EDUCATION



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VOLUME IV

*Improving Experiences and Outcomes of Education
for Learners with ASC*

Edited by

Neil Humphrey

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Introduction: Improving Experiences and Outcomes of Education for Learners with ASC

*Neil Humphrey, Caroline Bond, Judith Hebron,
Wendy Symes, and Gareth Morewood*

Introduction

In the preceding volumes we have laid out the landscape of autism education in terms of theory, research, policy, and practice. Drawing upon two complementary theoretical frameworks (Bronfenbrenner, 2005; Lewis & Norwich, 2005) to shape our work, we have discussed the distinct needs, experiences, and outcomes of those with ASC and examined in particular how these are influenced by peer relationships, and school, teacher, and support staff issues. Throughout we have also attempted to highlight the role played by more distal contextual influences (e.g. education policy, public awareness, the media) and have made a concerted effort to foreground the perspectives of those with autism wherever possible.

In this final volume we tackle what is arguably the most important, challenging, and controversial aspect of autism education – improving experiences and outcomes of affected learners. All of the above is arguably for nought if knowledge and understanding is not translated into meaningful action. But this process is far from straightforward. The many stakeholders in autism education – including those with ASC, their parents and families, academics, educators, policy makers, charities, and support services – continue to fervently debate *what should be done*. There is of course no simple answer, no ‘magic bullet’. Children and young people with autism share as many differences as they do similarities and to expect a single approach or intervention to meet the needs of all would be naïve in the extreme. Instead, we present and discuss the different elements of a broad framework for action – the whole school saturation model for autism – derived from our recent work (Morewood, Humphrey, & Symes, 2011 – included in this volume). We seek to use this model to build a bridge between the ‘high, hard ground’ of academic research and the ‘swampy lowlands’ of real-world educational practice (Marshall, 2013). However, before doing so, we briefly digress to discuss the nature of the autism education evidence base.

Evidence and Autism Education

A core issue that permeates all aspects of autism education is the role played by research evidence. In many ways this is no different from other areas of education, where the promotion of ‘evidence-based practice’ continues to be a source of controversy (see, e.g. Biesta, 2010). However, in autism education this issue is arguably magnified, for several reasons. First, the very nature of autism means it is always a highly emotive topic. Second, the field is strongly influenced by the scientific/medical model and the hierarchies of evidence that this imposes (e.g. Rawlins, 2008). Third, approaches to intervention proliferate, leading many to seek a distinction between those that are ‘proven’ and ‘unproven’ as a means of enabling better-informed decisions about provision. Indeed, the *No Child Left Behind* Act in the United States meant that certain federal funding for schools could only be acquired in order to implement approaches based on ‘scientifically based research’ (Mesibov & Shea, 2011, included in this volume). Fourth, certain autism interventions – and claims made about the evidence supporting their use – are the source of considerable debate (see, e.g. Shea’s (2004) critique of the evidence base for early intensive behavioural interventions). Finally, the prominence and centrality of ‘evidence’ in academic and professional literatures around autism education also applies to questions of placement. In an early example included in Volume 1, Mesibov and Shea (1996) argue against the concept of full inclusion, highlighting that, ‘there is very little empirical evidence for this approach, especially as it relates to autism’ (p. 337).

A strong empirical focus can clearly be beneficial for autism education. For example, it has enabled the field to advance beyond ‘egregious fads’ such as facilitated communication, whose evidence base does not stand up to scrutiny (Mesibov & Shea, 2011, p. 119). As the evidence base for autism interventions has grown, a number of systematic reviews and meta-analyses have been published that help to determine ‘what works’. These vary in their focus, in some cases offering a synthesis of findings relating to highly specific intervention types and/or outcomes (e.g. school-based social skills interventions – Bellini, Peters, Benner, & Hopf, 2007) and in others offering a much broader, comprehensive approach (e.g. educational provision – Parsons et al., 2011, included in this volume). A key consideration given the remit of this work is determining what defines an intervention as educationally relevant, and this is by no means straightforward (Bond, Symes, Hebron, Humphrey, & Morewood, 2014; Eikeseth & Klintwall, 2014). We might therefore ask if there is evidence of educational utility (e.g. explicit consideration of educational utility either using study data derived from staff in the child’s education setting or clear involvement in, or delivery of the intervention by school staff/peers) and/or effectiveness in the educational context (e.g. at least one outcome measure focusing on the child within their primary education setting) when examining intervention studies (Bond et al., 2014).

However, caution is also required. Mesibov and Shea (2011) note a number of problematic issues in the push to promote evidence-based practice, including the limiting of interventions to those whose goals are easier to measure/quantify, the restrictive effects of manualised approaches to treatment, and reservations about the uncritical acceptance of the randomised-controlled trial as the ‘gold standard’ of evidence. To this we would add a number of related concerns, including a failure to establish the social validity of some interventions, the limited external validity of tightly controlled trials, and a failure to effectively enact broad dissemination and scaling-up of successful interventions. Ultimately, a balance in focus must be struck between ‘evidence-based practice’ and ‘practice-based evidence’ to develop effective interventions that schools can and will use. As a means to achieve this, Fishman, Penuel, Allen, Cheng, and Sabelli, (2013) suggest that partnerships between developers and implementers that focus on practice dilemmas are crucial. Kasari and Smith (2013) have made similar arguments specifically in relation to autism research. They argue that for interventions to be successfully delivered in schools there needs to be awareness of the extent to which evidence-based interventions can be adapted to and implemented in ‘real life’ school contexts; that interventions should focus on meaningful outcomes that are relevant to child and family needs and address core features of autism; that long-term effects need to be evaluated; and, that research should take place in educational settings. Developing educational interventions in this way would also enable the effects of different interventions occurring simultaneously (as often happens in schools) to be taken into account.

A Whole-School Saturation Model of Autism Education

The model proposed by Morewood et al. (2011) that provides the core framework for this article was originally developed to illustrate the principles of effective inclusion of learners with ASC in a secondary mainstream school but it is arguably equally applicable to other educational phases and contexts. The word ‘saturation’ is deliberately foregrounded to emphasise the need for autism-friendly principles and practices to permeate every aspect of school life. Prominence is also given to the integration and co-ordination of strategies, with the hope of avoiding a fragmented, ‘programme for every problem’ approach that is neither cost-efficient nor sustainable (Domitrovich et al., 2010). The model is consistent with the two primary theoretical tools informing this body of work. Aligned with Bronfenbrenner’s (2005) bio-ecosystemic theory, the model highlights the importance of micro- and meso-system inter-relationships (e.g. the peer group and classroom) at its core, while also drawing on more distal exo-system influences (e.g. school systems, policy). The general differences position (Lewis & Norwich, 2005) is also acknowledged, particularly in relation to the need for flexible provision and

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direct support and intervention that takes account of both individual and group differences.

Available space does not permit detailed discussion of every element of the model (Figure 1); instead, we prioritise those aspects that connect most meaningfully to issues raised in the preceding volumes (e.g. peer education and awareness). The reader is encouraged to refer to the original article for discussion of *developing the school environment, creating a positive ethos, and policy development and embedding practice*.

The Agent of Change

The starting point of the model is the ‘agent of change’. This is a central figure which is both knowledgeable and influential, and can co-ordinate and manage provision throughout the school. Typically – although not exclusively – this would be the individual responsible for special educational needs and disabilities provision. This individual is also a member of the school’s leadership team – a crucial factor in determining whether the proposed innovations ‘take hold’. Leithwood, Harris, and Hopkins (2008) argue that, ‘Leadership acts as a catalyst without which other good things are unlikely to happen’ (p. 28). Our own empirical evidence would appear to support this assertion, with significantly better outcomes observed in schools where the intervention co-ordinator was a member of the school leadership team in the evaluation



Figure 1: The whole-school saturation model for autism education (Morewood, Humphrey, & Symes, 2011)

of the achievement for all special educational needs programme (Humphrey, Lendrum, Barlow, Wigelsworth, & Squires, 2013). The agent of change pushes thinking and practice forward, often meeting with resistance. As such, energy, resilience, and good humour are useful traits.

Peer Education and Awareness

The reciprocal effects peer interaction model (REPIM) and its associated evidence base introduced in Volume 2 clearly highlights the important role played by peers in the determining the educational experiences and outcomes of learners with ASC. This body of knowledge suggests that we might intervene in a number of ways. First, we can improve peer awareness (and subsequently attitudes and behaviours) by providing information about autism. But how should this process be managed? Here we can return to the work of Campbell and colleagues (e.g. Campbell & Barger, 2014 – see Volume 2). The reader will recall that Campbell draws upon social persuasion theory, arguing that we need to consider factors such as the source, message, channel, and audience. Credible, likeable sources that are recognised as having power, status, and authority are more persuasive; in the school context this might translate to a member of the school leadership team who is popular with students. In terms of message, educators can use *descriptive* information to highlight similarities between the audience and target, *explanatory* information to increase understanding and correct attributions about the cause of the differences observed in individuals with autism, and *directive* information to provide guidance about how to interact with and support such students (Campbell & Barger, 2014). This can be supplemented by exploring the achievements of individuals with autism (e.g. Stephen Wiltshire's outstanding cityscapes) to highlight the strengths that ASC can bring and contribute to a positive ethos (Morewood et al., 2011).

Second, given the inverse relationship established between social support from peers and experience of victimisation (e.g. Humphrey & Symes, 2010) and loneliness (Lasgaard, Nielsen, Eriksen, & Goossens, 2010), peers can and should be used as a protective resource. An example is the Circles of Friends approach, in which a small group of typically developing peers form a support network around a focal child. Evidence from a range of contexts suggests that this system may have specific beneficial effects for students with ASC and their peers (Frederickson, Warren, & Turner, 2005; Gus, 2000; Schlieder, Maldonado, & Baltés, 2014). However, it is also important to take into account the preference (or need) for solitude expressed by some children and young people with autism (e.g. Calder, Hill, & Pellicano, 2013); peer social support systems should therefore be a resource to be drawn upon when needed rather than being forced upon those with ASC.

Third, given the greatly increased risk of victimisation associated with autism, interventions that directly address bullying are warranted. A useful

starting point is to build upon what is known about bullying prevention in general. Unfortunately, despite some positive outcomes (e.g. Tofi & Farrington, 2010), the effects of bullying interventions are not always practically significant and are more likely to influence knowledge and attitudes than actual behaviour (Merrell, Gueldner, Ross, & Isava, 2008). However, those approaches which include a component targeting students deemed to be 'at risk' appear to produce slightly better outcomes (Ferguson, Miguel, Kilburn, & Sanchez, 2007), suggesting a specific focus on youth with autism (or at least students with special needs more generally) is justified. Consistent with the bio-ecosystemic framework and the whole-school saturation model, Whitted and Dupper (2005) note that, 'the most effective approaches for preventing or minimising bullying in schools involve a comprehensive, multilevel strategy that targets bullies, victims, bystanders, families and communities' (p. 169).

Direct Support and Intervention

A systemic focus can be very effective, but clearly direct individual or small group interventions are also required. Consistent with the general differences framework (Lewis & Norwich, 2005), these will need to balance consideration of individual needs as well as the profile of strengths and difficulties associated with ASC more broadly, in addition to other important contextual factors (e.g. setting). Our recent systematic review of the literature on autism education highlighted a large body of evidence for interventions with a range of foci, including joint-attention, social interventions, play, communication, challenging behaviour, flexibility, pre-academic/academic skills, school readiness skills, cognitive skills, motor skills, and adaptive/self-help skills, in addition to comprehensive programmes that promote a range of outcomes (Bond et al., 2014). This and other reviews (e.g. Parsons et al., 2011; Wong et al., 2013) have demonstrated that the majority of the available evidence base pertains to children rather than adolescents with autism; much less is therefore known about effective interventions for ASC in secondary school settings. Furthermore, the various reviews have pointed to peer-mediated interventions as offering particular promise in the promotion of social skills (while also potentially improving peer understanding of and attitudes towards autism). Finally, although some interventions reviewed were implemented by researchers or took place in less 'naturalistic' educational environments, there is good evidence that school staff can effectively implement a range of interventions following some initial training. This has obvious implications for both the cost-effectiveness and sustainability of such work.

Direct support and intervention can also be an effective means through which to prevent or reduce victimisation of children and young people with autism, typically in the context of social skills interventions. This should be tailored to the needs of the individual student, but may include content

designed to develop understanding of bullying to prevent over/under reporting (Moore, 2007), improve understanding of social cues in order to prevent social vulnerability (Sofronoff, Dark, & Stone, 2011), identify contexts in which the child is most vulnerable to bullying and provide avoidance strategies, role play bullying situations to teach response strategies, and offer generic prevention strategies (e.g. safety in numbers – Biggs, Simpson, & Gaus, 2010). The emergent evidence suggests that these techniques can have meaningful effects. Tse, Strulovitch, Tagalakis, Meng, and Fombonne's (2007) study, for example, examined the effects of a 12-week group intervention that included content such as awareness and expression of feelings, recognition of non-verbal communication, negotiating with others, and responding to bullying and teasing (e.g. ignoring, stating feelings, 'comebacks'). The authors found significant effects on social cognition, communication, motivation, and other domains, with small–medium effect sizes. In another example, Beaumont and Sofronoff (2008) examined the effects of the 'Junior Detective Training Programme' through a randomised-controlled trial. This 7-week intervention for adolescents with ASC included a computer game designed to teach emotion recognition, regulation, and social interaction, small group therapy sessions to facilitate generalisation and extension activities for teachers. Session content was directly relevant to bullying prevention, and included activities to help students differentiate friendly joking from bullying, and how to deal with bullying. Amongst the positive effects identified by the authors was a significant improvement in emotion management strategies in relation to bullying and teasing. Treatment gains were maintained at 5-month follow-up.

Flexible Provision

A pre-requisite of effective practice in the whole-school saturation model is flexibility in provision. As noted earlier, despite their sharing of common characteristics, no two students with ASC are the same and provision therefore needs to reflect this diversity of need. For example, students may be better placed in teaching groups that suit their individual needs (e.g. positive role models and the need for good quality, structured teaching) rather than their ability in a given subject. Children's daily time tables need to be adaptable, such that they may be withdrawn from lessons in which the cognitive and/or social demands are considered to be too high (Morewood et al., 2011). These periods provide an excellent opportunity for specialist support and intervention of the kind noted above. Being flexible with school rules and routines is also important. For example, some learners with autism experience disturbed sleep patterns and can arrive to school late. Such cases require staff to be prepared and understand the child's needs – allowing them time to get settled in a designated area and providing them with the tools to express their

readiness to join the class (e.g. visual indicators such as a traffic light system) (Morewood et al., 2011).

In some cases, flexibility of provision may even extend to students to having dual-roll placements through the development of formal partnerships between mainstream and specialist schools. The proportion of time spent in each setting can be reviewed periodically and adapted as necessary. This approach moves us beyond polarised, simplistic debates about whether mainstream or special educational settings are 'the most appropriate' for students on the autism spectrum (e.g. Mesibov & Shea, 1996), recognising that a student's needs, and how/where these are best met, are likely to change over time. Of course, the feasibility of such an approach is highly dependent on local contextual factors, including the availability of funding, the existence of different forms of provision/placement, and the relationships between sites. However, building these kinds of systems and partnerships can have multiple, wide-ranging benefits. A recent analysis of mainstream-special school collaboration in Northern Ireland found that, 'without exception, pupils and staff in both sectors benefit positively and lastingly from the experience of learning alongside one another' citing improvements in inclusive opportunities for teaching and support staff and pupils, shared education and resources, skill development for staff and pupils, the challenging of barriers to inclusion, improvements in literacy and numeracy, showcasing opportunities to the wider community, increased achievement and wellbeing, social and educational spin-offs, professional respect and appreciation, and developments in self-evaluation (Education and Training Inspectorate, 2012, p. 2).

An additional/alternative form of provision that has become increasingly visible in the international education landscape in recent years is resourced mainstream school provision (Ridell, Tisdall, Kane, & Mulderigg, 2006). This 'middle ground' in the continuum of provision may have particular utility for students with autism. Bond and Hebron (2013) document its development in nine schools across the city of Manchester, England. Using city council investment, participating schools set up a specialist resource area to provide the accommodation capacity for additional numbers (typically 7–10) of students with autism and/or specific language impairments. This accommodation included a classroom, individual teaching area, designated space for small group work, a speech and language room, and a calm space. They appointed specialist teachers and teaching assistants and commissioned speech and language therapy services from the local health services trust. Funds were also used for a comprehensive, multi-strand training package that included all school staff, including lunchtime supervisors and administrators. Theoretically, students with ASC attending such schools will benefit from the assets associated with both mainstream and specialist education settings, but in a single location (e.g. the opportunity to interact with non-disabled peers, while also receiving support from experienced, specialist staff). As with the dual placement model described above, the amount of time spent in the resourced and

mainstream areas of the school could be reviewed and adapted according to need. During the 12 months of Bond and Hebron's (2013) evaluation, significant improvements were seen in the academic and social progress of the students with autism, and in the sense of teaching self-efficacy and confidence among school staff. However, it is important to balance these benefits against the considerable investment required to set up and maintain resourced mainstream provision; questions therefore remain about scalability. Furthermore, in a comparative study of mainstream and resourced provision, Frederickson, Jones, and Lang (2010 – included in this volume) note that comparable provision could be made across settings given appropriate staff training.

Training and Development of Staff

All school staff, but especially classroom teachers, play a pivotal role in the success of educational provision for students with autism. They are responsible for the implementation of policies, processes, and practices that ultimately determine the quality of this provision. As we saw in Volume 3, teachers generally have positive attitudes towards children and young people with ASC, but report tensions when dealing with the difficulties they experience in social and emotional understanding. These tensions can influence the quality of their interactions with such students, and potentially undermine the development of the positive relationships that underpin learning in the classroom. Effective training and development in relation to autism is therefore crucial, indeed, it has been identified by parents as the single most important factor in improving the quality for provision (Jindal-Snape, Douglas, Topping, Kerr, & Smith, 2004). Consistent with the general approach promoted in our model, this should be, 'regular, on-going and part of a commitment of all staff . . . a one-off twilight session is never going to suffice' (Morewood et al., 2011, p. 65). It is our view that this process should begin during initial teacher education, and where possible include placement in appropriate specialist settings. In addition to better preparing teachers for practice, it may also have the added benefit of increasing a sense of personal responsibility for the learning of students with ASC, rather than this being seen as the domain of support staff (e.g. teaching assistants) or the school's special education specialist. However, recall that less than 15% of teachers report having received any autism input during their initial training (Morrier, Hess, & Heflin, 2010). Thus, significant change is required, perhaps as part of a general shift towards more explicit and detailed consideration of special educational needs during this critical developmental phase in teachers' careers. Although high-quality empirical evidence is currently scarce (Alexander, Ayres, & Smith, 2015), there are indications that where autism input is, 'strategically placed within the confines of a teacher training program, [it] can both significantly

increase participants' perceptions and knowledge of autism . . . and evidence-based practices as well as reduce overall stress and anxiety levels' (Leblanc, Richardson, & Burns, 2009, p. 166).

What form might the staff development that follows initial training take? In the UK, awareness of the need for general ASC training programmes for mainstream staff resulted in the development of the Autism Inclusion Development Programme and subsequently the Autism Education Trust (AET) programme of training, which comprises a 90-minute awareness raising session for all staff (Level 1), a one-day course for those working directly with children with ASC (Level 2), and finally a two-day course specifically designed for those with previous experience or a leadership role in schools (Level 3) (Cullen, Cullen, Lindsay, & Arweck, 2013). Similarly, in the United States there has been the development of ASC training materials through the National Professional Development Centre on Autism Spectrum Disorders. The evaluation of the AET programme by Cullen et al. (2013) found that all three levels of training yielded positive evaluation ratings and changes in knowledge and perceptions. Although 3-month follow-up samples were small, staff that had attended Level 1 reported increased skills and confidence and inclusive and positive perceptions of pupils with ASC. Staff who attended Level 2 reported improved adaptation of learning environments and increased use of appropriate teaching strategies. Finally, staff that attended the Level 3 training reported they were more likely to seek the views of parents post-training.

Conclusion

In concluding both this introduction to the volume and the work overall, we again draw upon Milton's (2012) 'double empathy problem' in autism (see Volume 2). Recall that Milton argues that difficulties experienced arise not from individual 'deficits' in empathy and social cognition among autistic people, but from a disjuncture in the disposition and understanding of the non-autistic population. Extending this, we return to the oft-cited list of impairments associated with ASC and propose that these may be used to prompt questions about how an autism-friendly education system might operate. To wit, we reverse notions of autistic inflexibility and instead ask, *how can we be more flexible in the way in which we organise educational provision?* As a counterpoint to the deficits in social communication that are characteristic of clinical descriptions of autism, we ask, *how can we improve communication between the range of stakeholders in autism education in order to improve the educational experiences and outcomes of students?* Finally, rather than focusing on problems in imagination among those with autism, we ask, *should we not be more imaginative ourselves in thinking about approaches to teaching and learning?* At their core, each of these questions requires us to more actively

consider the perspectives of students with autism. A little empathy goes a long way.

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