

Institution: University of Kent
Unit of Assessment: 35, Music, Drama, Dance and Performing Arts
Title of case study: Changing minds, changing behaviour: drama and autism
1. Summary of the impact <p>The AHRC-funded project 'Imagining Autism' has had a significant, and in some cases life-changing, impact on the participants and their families, as well as on educational psychologists, charities and experts working in the fields of autism and cognitive functioning.</p> <p>The impacts are two-fold:</p> <ol style="list-style-type: none"> 1. Significant and lasting behavioural changes in the 22 participating autistic children; 2. Reevaluation of drama and play-based methods to promote well-being in autistic children, specifically by: educational psychologists and teaching staff at Helen Allison School; the Director of Research at the National Autistic Society; and the Consultant Community Paediatrician at the Children's Assessment Centre, Kent and Canterbury Hospital, along with 15-20 of her staff. <p>The project has challenged stereotypes and departed from skills-based interventions (which focus narrowly on specific cognitive or social skills, such as counting, or dressing) prevalent in education and health settings, leading to new understandings of the capabilities of a marginalised group. It has demonstrated its capacity to transform lives.</p>
2. Underpinning research <p>A small pilot project 'Puppetry and Play as Interventions for Autistic Spectrum Conditions' (2009) was funded by University of Kent Enterprise. School of Arts researchers working in a local special school, and observed by psychologist Julie Beadle-Brown, established methodologies for the intervention and evaluation elements of the subsequent AHRC-funded project, 'Imagining Autism' (October 2011- March 2014).</p> <p>Imagining Autism, based at the University of Kent, was led by Nicola Shaughnessy (Drama), working with Melissa Trimmingham (Drama), Julie Beadle-Brown (Tizard Centre, University of Kent and Professor of Disability Studies at La Trobe University), and David Wilkinson (Psychology). 22 children aged 7-11 and from across the autistic spectrum, in three specialist educational schools in Kent between January and December 2012, were exposed to a series of imaginary environments in conjunction with drama and play-based activities (using puppetry, physical performance techniques and responsive digital technologies) to facilitate their language development, shared attention, socialisation, empathy and imagination. At Helen Allison National Autistic Society (NAS) School the team worked closely with Educational Psychologists who shared their research findings. Diagnostic services locally have contributed to the research via the Consultant Community Paediatrician at the Children's Assessment Centre, Kent and Canterbury Hospital, who has served as a member of the Imagining Autism Advisory Board.</p> <p>Principal research questions were:</p> <ol style="list-style-type: none"> 1. How can the 'triad of impairments' which are the diagnostic criteria for autism (difficulties with communication, social interaction and social imagination) be addressed through drama? 2. How can the efficacy of these drama-based therapies be measured? <p>The work has challenged assumptions about appropriate learning environments and intervention methods. Witnesses to the work, including health and education professionals, have been consistently surprised by the children's responses to the environments. These were not based on the principle of low arousal, but were highly sensory, stimulating and child-centred, giving the</p>

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participants creative autonomy as 'co-producers' in the performance activities. Not only were the children's tolerance levels much higher than expected, there were significant benefits (changes in behaviour with gains in communication and language) suggesting that traditional pedagogical approaches might have to be rethought.

Research Findings

Evidence has emerged from the data provided by parents and teachers (using traditional methodologies of questionnaires, diaries and transcribed interviews) to indicate that the methods result in positive change, ameliorating the triad of impairments through reported gains in language, communicative intent, social interaction and imaginative play. A fluid, child-led method of performance, giving the child an autonomy that is rare in current practice in any sphere (education, arts or health) has been developed [1, 3, 4]. The research has also led to new understanding of the imagination in autism and how this is differently inflected compared to neurotypical children. The evidence-based work (using case studies from *Imagining Autism*) was strongly endorsed by peer reviewers for the *Interdisciplinary Science Reviews* article [2]. Moreover this person-centred, interactive method has much wider application beyond school settings (eg home and clinic) and beyond autism for other conditions involving atypical cognitive functioning (eg dementia). Finally, through the interdisciplinary team the project challenged paradigms of knowledge through interaction between science and art, developing new methodologies for evaluating qualitative material from arts research. Psychologists have tracked changes in children's behaviours (eg eye contact, turn taking, laughter) quantitatively using DVD footage. This part of the methodology has emerged as one of the most significant features of the research and is being developed through an interdisciplinary PhD studentship between the NHS and the University of Kent (Psychology and Drama).

The research was undertaken at Kent by Nicola Shaughnessy, Lecturer (1999-2007), Senior Lecturer (2007-2012), Professor (2012-Present) and Melissa Trimmingham, Lecturer (2004-2011), Senior Lecturer, (2011-Present).

3. References to the research

Research Outputs

1. Nicola Shaughnessy, 'Knowing Me, Knowing You: Cognition, Kinesthetic Empathy and Applied Performance' in *Kinesthetic Empathy in Creative and Cultural Practices*, eds. D. Reynolds and M. Reason, (Intellect, 2012). (REF Output No. 2)
2. Nicola Shaughnessy, 'Imagining Otherwise: the Neuro-divergent Aesthetic and Contemporary Performance', commissioned for *Interdisciplinary Science Reviews, Special Edition: Experiments in Theatre: New Directions in Science and Performance*, vol 38, no 4 (2013) (REF Output No. 4)
3. Melissa Trimmingham, 'Touched by Meaning: Haptic Affect in Autism' in *Affective Performance and Cognitive Science: body, brain and being*, ed N. Shaughnessy (Methuen, 2013) (REF Output No. 3)
4. 'Imagining Autism: Theatre and Neuroscience,' keynote lecture, Dialogues between Theatre and Neuroscience: Fifth International Conference, Rome, 6 - 7 June 2013, Sapienza University of Rome.

Project funding included:

4. 'Ideas Factory' University of Kent Enterprise (2009), 'Play and Puppetry as interventions for autistic children,' Pilot Project, £7,500.
5. AHRC Research Award 'Imagining Autism', (AH/1004394/1): £ 344,187.
6. University of Kent Enterprise, documentary film funding, (2012), £10,000.
7. Kent Health (University of Kent in consultation with the NHS), funding for three-year doctorate developing the research (2013), £13,590 maintenance stipend and £3,828 p.a. for tuition fees.

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4. Details of the impact

We have evidence of impact from:

- testimonials by parents and professionals
- changes in the curriculum at a National Autistic Society flagship school
- invitations to present on the project regionally, nationally and internationally

Imagining Autism's most significant impact at this stage is upon the individual participants (22 in all), in some cases transforming lives: 'He has gained in his imagination, he is talking more, commenting on everything. He is identifying emotions, and naming them. He gave me a kiss and a cuddle which is very rare. He is reasoning things out – we had a conversation for 15 minutes for the first time.' Strikingly, some of the testimony revealing these benefits was given before the parent was aware of the project sessions: 'He really floored X and I last night with this communication!! He talked loads and in ways we had never heard him before! Are you doing something new at school with him?' [7].

Change in an individual child informs and influences the thinking of carers, teachers, families, peers and professionals. This research into the language and culture of a minority group, moreover, has provided its members with self-awareness and new modes of imaginative self-expression [3]. The Assistant Educational Psychologist at The Helen Allison School, Kent (National Autistic Society) attests to the **changed cultural values** in the school and the students' enhanced capacities: 'Imagining Autism is a unique and captivating intervention that promoted the well-being and self-confidence of participating students, all of whom have presented noticeable improvements in their communication, interaction and imaginative play skills.' Participants have become more accepting of other students in their personal space, more responsive to others in the play environments, and more attentive to the consequences of their own gestures. The Assistant Educational Psychologist also notes how peers have benefited: 'The pretend play from the pod has transferred to the playground... [the children] have also initiated games together and with other peers...in regular pretend play' [5]. The Consultant Community Paediatrician at the Children's Assessment Centre, Kent and Canterbury Hospital, noted that some parents of the children in the study have seen 'their children do things in the environment [created by the project] that they have never seen before,' and that 'some [of the children] have become more communicative' [8].

Parents testify to the positive impact on the family: 'Thank you all so much for what you did, I don't know how to put into words what it has done for not only Z but **for all of us**' [7]. The Assistant Educational Psychologist at The Helen Allison School similarly notes that the 'benefits experienced by the students [have] also positively influenced their families at home, as well as their peers and educators at Helen Allison School' [5].

Imagining Autism has changed the design and delivery of the NAS Curriculum at Helen Allison School. The educational psychology team now recognizes that students can 'creatively lead their own narrative with increasing freedom each week.' The team also understands the 'value of reinforcing imagination through intensive interactions between modelling and replication, as well as providing reflective time for students to process and instinctively choose how they wish to explore independently.' The school is promoting personal and professional development 'to learn about the techniques used that could be incorporated into everyday learning approaches,' stating that 'we... wish to incorporate the drama-based techniques with our approaches to learning' [5]. This influence was **extended regionally** when the research team were invited to present at an NAS consortium day (17/10/12) for staff training in schools for profound, special and complex needs. 15 participants representing schools in the South East region were trained in our participatory and sensory approaches.

A changed understanding of 'well-being' drives policy in care, education and treatment. The reported success of the project led to an invitation to participate in the NAS's annual professional conference (6/3/13). With 650 delegates this is **one of the major platforms for UK policy development and debate** on autism and special needs. Richard Mills, Director of Research at the

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NAS, met the project team at this conference. Subsequently Jacqui Ashton-Smith, Executive Principal NAS has facilitated a tour of seven NAS schools in the UK by the project team to train teaching and caring staff in the Imagining Autism approach.

The work has reached out regionally into health settings and the NHS, via local diagnostic services. The Consultant Community Paediatrician at the Children's Assessment Centre, Kent and Canterbury Hospital, a member of the Imagining Autism Advisory Board, has pioneered the Imagining Autism approach in diagnostic services and estimates that this has already benefited approximately **150 children per year** presenting for diagnosis at her clinic. She comments: 'the project has shown that use of these experimental environments can help autistic children to show skills that are not apparent in clinics or classrooms.' The project enabled her to form 'a more detailed picture' of participating children's needs. The project has 'highlighted the need to consider all avenues to assess children so that we have a really clear picture of autistic children's abilities and...identify how they may be supported at school and at home' [8]. She has shared these findings with between 15 and 20 medical specialists in the East Kent region.

To summarise, Imagining Autism has resulted in significant local and regional changes in attitudes and practice in both education and health that are now creating national impact. These changes have already had a significant, beneficial impact on the individual children and families involved in the project. To conclude, in the words of the Assistant Educational Psychologist at Helen Allison School: 'we can easily envisage Imagining Autism positively influencing the lives of many more individuals impacted by autism across national and international services' [5].

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Article on the project **Imagining Autism: Autism, Play and the Science** by Sarah Fox, Project Manager, People United, Canterbury Innovation Centre, 3rd April, 2013. This corroborates evidence of change in the children, quoting parents, and the contribution made by Imagining Autism to the well-being of the participants: <http://www.peopleunited.org.uk/blog/?p=287>
2. Article 'A new Environment' by Gemma Williams, Imagining Autism practitioner, in *Arts Professional*, 21st May, 2013, attesting to the impact of the innovatory approaches of Imagining Autism on the children participating: <http://www.artspromotional.co.uk/magazine/feature/new-environment>
3. Selected feedback made by the general public. This corroborates how the work has impacted upon professionals in health and education, carers and families: <http://imaginingautism.tumblr.com>
4. Senior Educational Psychologist, Helen Allison School, Meopham, Kent can corroborate impact on the six children at Helen Allison School and impact on the National Autistic Society Curriculum.
5. Assistant Educational Psychologist, Helen Allison School: written testimony to corroborate impact on the six children at Helen Allison School and impact on the curriculum.
6. Head of Communication and Interaction, St Nicholas School, Canterbury, can corroborate impact on the eight children at the school.
7. Parent, Helen Allison School has provided written testimony to corroborate impact on her son at home and at Helen Allison School.
8. Clinical Lead/Consultant Community Paediatrician at the Children's Assessment Centre, Kent and Canterbury Hospital has provided written testimony to corroborate impact on her diagnostic practice and that of her colleagues.