

Research Placement with the National Association for Gifted Children (NAGC),
Milton Keynes, United Kingdom

This report will review the research I was involved in with the NAGC. In part this was for my dissertation but also supported priorities of the NAGC around improving assessments for gifted children and more effective screening of ADHD. The research endeavoured to also further current understandings of the individual differences in motivation in gifted children and how these differences are influenced by school and home environments. I took on additional work involving training and informing staff at the NAGC around working memory research and working directly to support and inform families of gifted children. These projects will be discussed in terms of the knowledge and experiences I gained and a reflection on my own personal and professional development throughout this placement opportunity.

1. The National Association for Gifted Children – their aims and ideals.

The NAGC was established in response to the growing need for additional support to be offered to families whose children were defined as “gifted”. The Department for Children, Families and Education classify a gifted child as being in the top 90% of the population, excelling in at least five academic subjects. (www.dcsf.org.uk) The NAGC raises national and international awareness of the vulnerability of highly able children and contributes to supporting the emotional, social and educational needs of young people. They offer an information line with education consultants for parents/carers as

well as regular children's activities and workshops for parents and teachers. Regular commissions are offered to them to deliver research into particular issues surrounding gifted children, their development and education policy. I benefited from working with this national charity; gaining a number of skills; from working with families, data collection and analysis, delivering training and strategic liaison with education consultants and the chief executive.

2. Current Research Project

Working memory is defined as our ability to process and store information concurrently within short-term memory. This ability had been found to be a strong predictor of learning outcomes in children (Gathercole et al., 2004; Cain et al., 2004; Alloway, 2009). Working memory capacity is closely linked to academic attainment; specifically reading (Siegal & Ryan, 1989), literacy and numeracy (Geary et al., 2004). The Chief Executive of the NAGC expressed a keen interest in exploring the working memory abilities of gifted children last year. This is due to growing concern in the frequency of gifted children being diagnosed with ADHD-type behaviours (Baum et al., 1998.) According to Gordon (1990) many gifted students develop impulsive and hyperactive traits. They also often show an inability to sustain attention. Prof. James Webb argues that these behaviours may develop through a lack of stimulation rather than a genuine impairment (Webb et al., 2005). Characteristics of ADHD such as inattentiveness and distractibility are associated to poor working memory capacities (Alloway et al., 2008). By screening gifted children with the working memory assessment potential misdiagnosis and over-

medication of gifted children may be avoided. Medication has been argued to harm their creativity and intellectual curiosity (Cramond, 1994).

“They are children who, despite their capacity for unrestricted learning and creative thought frequently fail to be recognised and given the challenge that they need.”

www.nagcbrtain.org.uk



I tested children on verbal and non-verbal tasks either in the office or in their own homes with their parents.

The research I conducted in partnership with the NAGC investigated working memory capacity and IQ in gifted children. I assessed home and school behaviours using the

Connor’s Behaviour Rating Scale (Connor’s, 1997) and motivation levels using a questionnaire developed from the Children’s Academic Intrinsic Motivation Inventory (Gottfried, 1986). Parents were asked about home routines via a questionnaire developed from Zimmerman’s (2004) Home Routines Questionnaire. The principle aims were to discover whether the working memory assessment more successfully screened for ADHD by detecting the neurological working memory impairment making it more accurate than a behaviour assessment. By comparing the working memory assessment to IQ and looking at socioeconomic backgrounds the stability of both assessments can be compared to corroborate past research that suggests that working memory is a more stable predictor

of ability across different socioeconomic backgrounds than the IQ tests (Engel et al., 2008). Through looking at individual differences in motivation and home routines the aim was to discover the underlying causes of ADHD-type behaviours in gifted children and strategies that could be effective for increasing children's focus and motivation.

The working memory model first proposed by Baddeley & Hitch (1972) and revised by Baddeley (2000) is made up of three distinct components, which interact fluidly. The phonological loop and visuo-spatial sketchpad are responsible for verbal and visuo-spatial representations being stored and rehearsed in the working memory. The central executive function regulates attention in the working memory system and the new addition to the revised model is the episodic buffer. This integrates working memory representations with items already within the long-term memory store. A recent study by Alloway et al (2009) found that when working memory and IQ assessments were conducted and then children re-tested after 6 years, working memory was a more powerful predictor of academic ability than the IQ tests were. This suggests that the working memory assessments tap a far greater component of the central executive function and various other skills that are vital for children to excel in school and classroom activities.

Through work with the NAGC I was challenged by the assumptions so quickly made about children. The NAGC constantly battles against the misunderstanding of the label 'gifted', which leads educators and policy makers to assume that a child does not need extra support. However, research has found that when a certain level of academic ability

is exceeded (usually beyond an IQ of 140) the likelihood of the child developing other difficulties such as Depression and other mental health issues increases (Webb et al., 2005). It takes a tremendous effort to link back into 'normality'. Many of the helpline calls and assessments I was involved in were with children who struggled to integrate at school due to difficult behaviours or bullying. Some had extreme perfectionism and high anxiety over failure. Parents were sometimes concerned about growing feelings of apathy from their child as they felt the school may not be demanding or stimulating enough to interest them.

This aspect of motivation is so compelling. Recent studies have shown that children can be gifted in their motivation to learn and that this is dissociable from having a high IQ (Gottfried & Gottfried, 2004). Whilst significantly more children with a high IQ also have high motivation, there is only a 15% shared variance in these two constructs.

Indicating that without motivation to learn, the potential within a child may never be fully realised (Gottfried et al., 2009). Nearly all of the children I assessed said that they often asked questions and loved finding out new things. However, many also said that it depended on the subject, if it was 'boring' or irrelevant they quickly lost interest. As educators and parents how can we continue to inspire motivation to learn? The children I spoke to liked questions and investigations, therefore, more discursive techniques may lead to these young researchers delighting in discovering the answer for themselves.

On a theoretical level the placement was advantageous through giving me an opportunity to conduct research for my dissertation with a unique cohort of gifted children.

I learnt the skills of science communication through disseminating research into practical and relevant fact sheets on working memory; motivation and ADHD for the charity to display on their website. I also delivered a training and development day to the NAGC team on working memory and learning. The discussions I initiated regarding the role of research in informing practice and policy were hugely beneficial for me. We discussed ideas for future research and the need for the findings to have a real life impact; research that makes a difference to the children the NAGC are supporting. For my own personal development it was a big challenge both in the office and when home-visiting be seen as an 'expert' on psychological research. This necessitated a professional yet approachable nature. I became very aware of the importance placed on my opinion as the 'expert view'. There are no quick or easy solutions to the concerns that parents had, often they place a lot of hope on one assessment or one meeting. Through working with the education consultants I learnt powerful listening techniques over the phone where often the parent may simply need encouragement. Questioning and listening were vital in order to ensure that what I said was relevant and informative. I learnt to think carefully on all possible views before advising something or stating research.



I delivered presentations and facilitated discussions relating to working memory, gifted children and future research

The skills I have developed from this placement have been extensive - challenging my own assumptions around 'giftedness' and encouraging debate for my dissertation theories. The direct work with families has provided me with skills in managing difficult family issues professionally and sensitively and offering opinion wisely after much cogitation. Following this placement I believe strongly that much more should be done for these children who could be the Einstein's, Curie's and Mandela's of the future. My hope is that high-impact research will not only lead to increased support for gifted children but that discoveries made around assessment, motivation and behaviour will be of use to all families and schools in their work to educate and inspire children and young people.

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