The Complex Learning Difficulties and Disabilities Research Project

Developing pathways to personalised learning

FINAL REPORT

Specialist Schools and Academies Trust

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The COMPLEX LEARNING DIFFICULTIES AND DISABILITIES Research Project: Developing meaningful pathways to personalised learning

REPORT OVERVIEW

The Specialist Schools and Academies Trust (SSAT) was commissioned by the Department for Education (DfE) to research ways to improve outcomes for children and young people with the most complex educational needs and disabilities through the development of evidence-based teaching and learning strategies. The research results of the project will be shared with schools and the wider education network.

Children and young people with complex learning difficulties and disabilities (CLDD) include those with co-existing conditions (e.g. autism and attention deficit/hyperactivity disorder (ADHD)) or profound and multiple learning disabilities. However, they also include children who have newly begun to populate our schools – among them those who have difficulties arising from premature birth, have survived infancy due to advanced medical interventions, have disabilities arising from parental substance and alcohol abuse, and/or have rare chromosomal disorders. Many may also be affected by compounding factors such as multisensory impairment or mental ill-health, or require invasive procedures, such as supported nutrition, assisted ventilation and rescue medication. While the concept of CLDD is widely recognised, an official definition has yet to be adopted. The project definition of complex learning difficulties and disabilities is being considered by the DfE.

Children and young people with CLDD are a distinctive group of learners requiring educators to make personalised professional responses to their profile of learning need. We have to equip teaching professionals to offer high quality education to these young people to prevent their disenfranchisement from the school system. We need to remodel our pedagogy and generate teaching strategies which will embrace them as learners. The debate around personalised learning, fuelled by the SSAT (www.ssatrust.org.uk), informs this.

The programme of research brought together a multidisciplinary team of researchers and advisors with specialisms across education, health, psychology, therapies and neuroscience. In Phase 1 of the project, the research team worked together with 12 special schools and staff, 60 children/young people, and their families, to develop educational resources to enable practitioners to formulate an effective teaching and learning package for the children and young people with complex needs in their classrooms. The project built on and synthesised existing national and international expertise in the field, as well as drawing upon practitioner experience to develop and trial modified and new approaches for these young people. Between September and December 2010, the resources were trialled in 50 further special schools in the UK and 15 internationally. In the third phase of the project,

between January and March 2011, the resources were trialled in 12 mainstream schools – six primary and six secondary – and two early years settings.

The outcome of the project is the CLDD Engagement for Learning Resource Framework to support educators of children and young people with CLDD. The key components are available to download online at http://complexld.ssatrust.org.uk. They include:

- CLDD Briefing Packs: a series of information sheets on conditions which commonly co-exist within the profile of CLDD; these give information on effective educational strategies associated with particular disabilities
- The Engagement Profile and Scale: an observation and assessment resource focusing on student engagement for learning
- The Inquiry Framework for Learning: a flexible educational practice framework, promoting multidisciplinary involvement
- Training materials and opportunities.

The project methodology was approved by the SERC at the University of Northampton, and quality assured by David Braybrook, an experienced practitioner in sensory impairment/speech, language and communication difficulties, and a member of SENDIST and tribunals for other allied professions, who reported to the project's Steering Board.

Contents

CLDD RESEARCH PROJECT TEAM AND SUPPORT NETWORK 7
CLDD RESEARCH PROJECT RECOMMENDATIONS 9
COMPLEX LEARNING DIFFICULTIES AND DISABILITIES: THE CONTEXT 11
TOWARDS DEFINING COMPLEX LEARNING DIFFICULTIES AND DISABILITIES 22
METHODOLOGY OVERVIEW 26
IDENTIFICATION OF STUDENTS FOR INCLUSION IN THE PARTICIPANT GROUP 33
INTRODUCTION TO DATA ANALYSIS 39
OUTCOMES FOR STUDENTS AND EDUCATORS 43
CLDD ENGAGEMENT FOR LEARNING RESOURCE FRAMEWORK 59
CLDD BRIEFING PACKS 62
ENGAGEMENT PROFILE AND SCALE 68
INQUIRY FRAMEWORK FOR LEARNING 87
MAINSTREAM SCHOOLS / EARLY YEARS SETTINGS ANALYSIS 103
MENTAL HEALTH ISSUES WITHIN THE PHASE 1 CLDD RESEARCH COHORT 125
TRAINING THE SEN WORKFORCE 131
THE ROLE OF TEACHING ASSISTANTS 139
TOWARDS TRANSDISICPLINARY WORKING 146
PREPARING FOR ADULTHOOD 154
THE FAMILY PERSPECTIVE 158
DISCUSSION 163
CONCLUSION 178

APPENDICES

Appendix 1: List of school participants
Appendix 2: Student information form
Appendix 3: Summaries of student conditions
Appendix 4: Exit interview schedules
Appendix 5: Development school student case study overview
Appendix 6: Engagement Profile and Scale
Appendix 7: TDA SEN professional development resources – information sheet

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Sharon Godden, parent representative
Professor Amanda Kirby, Medical Director, Dyscovery Centre, University of Wales
Michele Moore, Training and Development Agency for Schools (TDA)

CLDD RESEARCH PROJECT RECOMMENDATIONS

1. Evidence from this research has defined the population of children with Complex Learning Difficulties and Disabilities. We recommend that Local Authorities adopt the national definition of Complex Learning Difficulties and Disabilities in developing provision and reporting trends to National Government.

2. Schools involved in this research project have demonstrated great commitment, insight and endeavour. The wider community of schools will now need to be informed. Systematic, critical reflection in schools will enable this. We recommend that the Specialist Schools and Academies Trust's Complex Needs booklets are used to aid and stimulate debate and discussion.

3. Children with Complex Learning Difficulties and Disabilities are presenting profiles of learning need not previously experienced by schools. We recommend that headteachers and SENCOs access the free CLDD Briefing Packs, available through the Specialist Schools and Academies Trust, and disseminate them widely across all of their staff team.

4. Educators involved in this project have embraced new pedagogy designed around the tenet of engagement. We recommend schools consider the introduction of the Specialist Schools and Academies Trust's Engagement Profile and Scale to aid and enrich student engagement in learning.

5. Complex Learning Difficulties and Disabilities will continue to be a growing phenomenon in all schools. A culture of inquiry will help to meet the learning challenges displayed by these pupils. We recommend that schools use the Specialist Schools and Academies Trust's Inquiry Framework for Learning.

6. This project's evidence base and outcomes was greatly enriched through collaboration internationally with other schools, universities and experts. We recommend that the International Network for Educational Transformation (iNet), in conjunction with Department for Education, considers frameworks for enabling this initiative to be sustained.

7. Mental health is the most pervasive and co-occurring need to compound and complicate children's special educational needs and disabilities. In recognition of this, the project has developed supporting information for schools. We recommend that schools consider creating a 'Wellbeing Team' to promote emotional wellbeing in all children and young people and build emotional resilience in those with Complex Learning Difficulties and Disabilities.

8. In line with the recommendations of the Salt Review and the Lamb Inquiry for better training for teachers of children with SEND, the findings of this project also support this, and illustrate the urgent need in relation to a new generation of children. We recommend that the new modules of training in special educational needs and disabilities, and specifically Complex Learning Difficulties and Disabilities, commissioned by the Training and Development Agency for Schools are systematically introduced across schools.

9. The diversity of need profiled in Complex Learning Difficulties and Disabilities should be reflected in the diversity of the workforce in schools which support children and young people with Complex Learning Difficulties and Disabilities. We recommend a re-designation of Teaching Assistant posts and others to build an appropriate wider workforce.

10. The contribution of Teaching Assistants at all levels is crucial in supporting children and young people with Complex Learning Difficulties and Disabilities. We recommend that detailed consideration be given to the training needs of Teaching Assistants working in the area of Complex Learning Difficulties and Disabilities.

11. Collaborative approaches are key to unlocking the innate abilities of children and young people with Complex Learning Difficulties and Disabilities. We recommend that transdisciplinary practice is encouraged wherever possible through joint initiation between the Department for Education and the Department of Health.

12. Young people with Complex Learning Difficulties and Disabilities are experiencing considerable challenges in the process of preparing for adulthood. We recommend that specific research be undertaken to identify more accurately their needs in the transition process.

13. Families of children with Complex Learning Difficulties and Disabilities are charting new care practices, therapeutic interventions and education pathways. We recommend that, in a spirit of equal partnership, professionals learn from these families, and apply their knowledge and insight to personalise programmes.

14. England has, through this Department for Education commissioned research project, defined and outlined the group of learners with Complex Learning Difficulties and Disabilities. This bedrock of research, professional practice and student focused information needs to be nurtured, disseminated and built upon. We recommend that the Government considers the most effective ways of doing this.

Information and materials related to the project are available online from the Specialist Schools and Academies Trust's Complex Learning Difficulties and Disabilities Project website: http://complexld.ssatrust.org.uk.

COMPLEX LEARNING DIFFICULTIES AND DISABILITIES: THE CONTEXT

Barry Carpenter, *Academic Director (Special Educational Needs) and National Director of the CLDD Research Project, Specialist Schools and Academies Trust*

Children and young people with complex learning difficulties and disabilities (CLDD) have been described as a 21st century frontier for education.[1] They are challenging our schools and most skilled educators; they do not fit our current range of learning environments, curriculum models or teaching and learning approaches.[2] Porter and Ashdown[3] describe them as:

> *…a wide and varied group of learners… [including] pupils who do not simply require a differentiated curriculum or teaching at a slower pace but who, at times, require further adaptations to teaching if they are to make progress.*

Current issues

The Government's 2010 figures show that students with special educational needs in England increased from around 1.53 million (19% of students) in 2006 to approximately 1.69 million (21% of students) in 2010.[4] Children with most severe needs represent about 3% of students in England.[5]

The population of students with CLDD in our schools is increasing. The numbers of children with severe and complex needs in one local authority more than doubled between 1981 and 2001.[6] Between 2004 and 2009, the total number of children with severe learning disabilities (SLD) increased by 5.1%, and the total number of those with Profound and multiple learning disabilities (PMLD) rose by an average of 29.7%.[7] Emerson[8] estimates that the prevalence of PMLD in the older child/young adult age range is increasing by 4–5% annually. In 2005, McClusky and McNamara reported that Government figures indicated that of the 700,000 disabled children in Great Britain, 'there are more than 100,000 severely disabled children in the UK and their numbers are known to be rising as a result of medical

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[1] Thomas, D. (2010) Personal communication.

[2] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.

[3] Porter, J. and Ashdown, R. (2002) *Pupils with Complex Needs: Promoting learning through visual methods and materials.* Tamworth: NASEN.

[4] Department for Education (2010) *Children with Special Educational Needs: An analysis.* London: DfE Publications.

[5] Hartley, R. (2010) *Teacher Expertise for Special Educational Needs: Filling in the gaps* (Research note: July). London: Policy Exchange.

[6] Emerson, E. and Hatton, C. (2004) *Estimating the Current Need/Demand for Supports for People with Learning Disabilities in England*. Lancaster: Institute for Health Research, Lancaster University.

[7] National Statistics (2004) *Special Educational Needs in England, January 2004.* London: Department for Education and Skills; National Statistics (2009) *Special Educational Needs in England, January 2009.* London: Department for Children, Schools and Families.

[8] Emerson, E. (2009) *Estimating the Future Number of Adults with Profound and Multiple Learning Disabilities in England.* Lancaster: CeDR, Lancaster University.

advances'.[9] Wolke[10] attributes some of this rise to an increase in the survival rates of extremely and very preterm babies. In the USA, 80% of at babies born at 26 weeks (i.e. 'extremely preterm') survive, and 96% of those born between 28 and 31 weeks (i.e. 'very preterm').[11]

This increase in children with CLDD is beginning to impact in schools. One headteacher writes:

> *Three years ago, we had up to seven children with gastrostomies – we now have 16. Just recently, we have enrolled two students with tracheostomies who need full time medical support.*[12]

Blackburn et al. report a further rise, stating that today there are 950,000 families in the UK with a disabled child,[13] and suggest that this may be an underestimate of 250,000. They attribute it in part to 'intergenerational poverty and modern medical progress'.[14] A recent study by Emerson has also emphasised the link between poverty and disability, stating:

> *When controlling for the effects of ethnicity and area-level deprivation, the prevalence of all major forms of intellectual and developmental disability is greater among children in families of lower socio-economic position.*[15]

As one governor of another school reported: 'The diverse range of children…is causing us to restructure our school.'

Who are the children with CLDD?

Students with CLDD have two or more conditions which overlap or interlock. Their diverse disabilities may include previously rare causal bases; for example, rare chromosomal disorders, assisted conception, maternal drug or alcohol abuse during pregnancy. The latter gives rise to fetal alcohol spectrum disorders (FASDs) which are the largest, non-genetic cause of learning difficulties.[16] Many may also be affected by compounding factors such as

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[9] McCluskey, J. and McNamara, G. (2005) 'Children in need'. In: C. Horton (ed.) *Working with Children 2006–2007: Facts, figures and information.* London: Sage Publications.

[10] Wolke, D. (2011) 'Preterm and low birth weight babies'. In: Howlin, P., Charman, T. and Ghaziuddin, M. (eds) *The Sage Handbook of Developmental Disorders.* London: Sage.

[11] National Center for Health Statistics (2008) '2004 period linked birth/infant death data'. Prepared by March of Dimes Perinatal Data Center, 2008. [cf. http://www.marchofdimes.com/baby/premature_indepth.html]

[12] Fergusson, A. and Carpenter, B. (2010) *Professional Learning and Building a Wider Workforce (Complex needs series).* London: SSAT.

[13] Blackburn, C., Spencer, N.J. and Read, J.M. (2010) 'Prevalence of childhood disability and the characteristics and circumstances of disabled children in the UK: secondary analysis of the Family Resources Survey', *BMC Pediatrics*, 10, 21.

[14] Ramesh, R. (2010) 'Study shows links between poverty and disability are more pronounced', *Guardian*, 20 April, 6.

[15] Emerson, E. (2010) 'Deprivation, ethnicity and the prevalence of intellectual and developmental disabilities', *Journal of Epidemiology and Community Health.* jech.2010.111773.

[16] British Medical Association (2007) *Foetal Alcohol Spectrum Disorders: A guide for healthcare professionals.* London: British Medical Association.

multisensory impairment or mental ill-health, or require invasive procedures, such as supported nutrition, assisted ventilation, and rescue medication. A headteacher[17] noted:

> *…we are seeing a regular increase in pupils with profound difficulties, some with complex needs, many with ASD, some with genetic conditions and some as the result of acute infections and diseases (e.g. cytomegalovirus, leukaemia and meningitis).*

The numbers of children with reduced life expectancy or needing palliative care are also rising. This is partly due to infants surviving extreme low birth weight or prematurity,[18] but also to improved medical expertise.[19] Clearly there are challenges both lifelong and educational for the families of children with CLDD. These families are charting new educational practices, therapeutic interventions, and care pathways, that professionals have not experienced before. (For a fuller discussion see the section on Families, p. 158.)

The implications for education

Children with CLDD are an infinitely diverse group, but what they have in common is 'pedagogical vulnerability',[20] manifesting in complex learning patterns, extreme behaviour and a range of socio-medical needs. As a teaching profession, we have not yet resolved how to meet their profiles of learning need through our teaching styles or curriculum frameworks. Without transformative education, they will become disenfranchised and ill-equipped to enjoy active citizenship in a 21st century society. However, research and practice have shown that where a child experiences educational success, their self-esteem is raised, enabling them to develop a level of emotional resilience[21] [22] which, in turn, raises their opportunities in life.

We are working with children in that spectrum of learning difficulty/disability associated with unique learning profiles, often linked to the nature of their disorder (e.g. FASD, Fragile X Syndrome, ASD), who require specific and specialised teaching approaches. Even where outstanding teaching of children with mild, moderate, severe or profound learning disabilities exists, there is an ever-increasing group of children with CLDD who do not fit the current range of learning environments, curriculum models, or teaching and learning approaches, and who are challenging educators. There are questions which arise from these challenges.

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[17] Cartwright, C. (2010) 'Response to Think Piece 2'. [Online at: http://blog.ssatrust.org.uk/thinkpiece/?p=16#comments; accessed: 25.5.10]

[18] Marlow, N., Wolke, D., Bracewell, M. and Samara, M. (2005) 'Neurologic and developmental disability at 6 years of age following extremely pre-term birth', *New England Journal of Medicine,* 352 (1), 9–19.

[19] Blackburn, C.M., Spencer, N.J. and Read, J.M. (2010) 'Prevalence of childhood disability and the characteristics and circumstances of disabled children in the UK', *BMC Pediatrics*, 10, 21.

[20] Carpenter, B. (2010) 'Disadvantaged, deprived and disabled', *Special Children,* 193, 42–45.

[21] Gilligan, R. (1999) 'Enhancing the resilience of children and young people in public care by mentoring their talents and interests', *Child & Family Social Work*, 4, 187–196.

[22] Scottish Executive Education Department (SEED) (2002) *Transitions in the Lives of Children and Young People: Resilience Factors (Interchange 78).* Edinburgh: SEED. [Online at: http://www.scotland.gov.uk/Resource/Doc/46997/0024005.pdf; accessed: 28.1.10]

Coexisting conditions

Where two (or more) conditions do co-exist in one child, the styles of teaching intervention recommended to support the pupil's learning may not always be totally compatible. There may be a powerful literature base and clear guidance on how to educate a child with one particular disability, but how does that look when conditions co-exist? For example, children who have Down's syndrome and mental health needs; Noonan's syndrome and physical disability; visual impairment (VI) and autism. In VI and autism, for example, despite there being much information available on each individual condition, the recommended teaching styles can be contradictory.[23] What should be the pedagogical resolutions? Where is the interface? Are there tensions? Which aspects of which approach take precedence? What are the criteria to inform our professional judgements in resolving such issues?

Premature birth

The EPICure UK study[24] reports that 80% of children born at less than 26 weeks gestation survive, and that over 50% of these have severe and complex disabilities. Many have neurological compromise and complex health needs, requiring supported nutrition, assisted ventilation, rescue medication for complex epilepsy, etc.[25] The need for intensive, very early intervention with these children is crucial.[26] Champion[27] details the brain development of these very-low-birth-weight, preterm infants and the neurological compromise they face. However, the sensory approaches many educators have previously found effective for delivering a relevant curriculum to children with Profound and Multiple Learning Disabilities may not engage them. Champion's ongoing research in New Zealand has shown that sensory pathways may not only be damaged, but also incomplete and compromised. What are the alternatives?

Fetal alcohol spectrum disorder

Children with fetal alcohol spectrum disorder (FASD) are newly acknowledged in the UK as a group of learners needing specialised intervention.[28] They may account for as many as one in 100 children,[29] ranging across the learning disability spectrum from mild to profound.

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[23] RNIB, Brookfields School, National Autistic Society and Sunfield (2011) *Children who Have Visual Impairment and Autism: Identifying and sharing practice (A resource pack).* London: RNIB.

[24] Marlow, N., Wolke, D., Bracewell, M. and Samara, M. (2005) 'Neurologic and developmental disability at 6 years of age following extremely pre-term birth', *New England Journal of Medicine,* 352 (1), 9–19.

[25] Brown, M. (2009) 'Education and invasive procedures: opportunities and challenges for the future'. Paper to the invasive procedures conference, University of Dundee (June).

[26] Soriano, V. (ed.) (2005) *Early Childhood Intervention – Analysis of Situations in Europe: Key aspects and recommendations* (Summary report). Brussels, Belgium: European Agency for Development in Special Needs Education. [Online at: http://www.european-agency.org/publications/ereports/early-childhood-intervention/eci_en.pdf; accessed: 27.07.09]

[27] Champion, P. (2005) 'The at-risk infant: approaches to intervention – The Champion Centre model'. In: B. Carpenter and J. Egerton (eds) *Early Childhood Intervention: International perspectives, national initiatives and regional practice.* Coventry: West Midlands SEN Regional Partnership.

[28] Blackburn, C. (2010) *Facing the Challenge and Shaping the Future for Primary and Secondary Aged Students with Foetal Alcohol Spectrum Disorders (FAS-eD Project)*. London: National Organisation on Fetal Alcohol Syndrome (UK) [Online at: www.nofas-uk.org; accessed: 27.7.11].

[29] Autti-Ramo, I. (2002) 'Foetal Alcohol Syndrome: a multifaceted condition', *Developmental Medicine and Child Neurology,* 44, 141–144.

Neuroscience shows that, with FASD, the brain's parietal lobe can be significantly reduced.[30] This area controls numeracy and mathematical computation. However skilled a teacher may be in differentiating the maths curriculum, if that part of the brain is compromised just how do we teach maths to this child?

Chromosome disorders

One in every 200 babies is born with a rare chromosome disorder,[31] a number which is set to increase due to the development of more sophisticated detection technology. Some conditions diagnosed are so rare they could be one of only a handful of children in this country, maybe even worldwide. Teaching approaches for these children are largely unknown and not widely communicated or understood by the teaching profession. Parents and professionals will need access to comprehensible information about genetics in general, and specific disorders in particular, if we are to improve the life chances of children with chromosomal disorders.[32] [33]

Mental health needs

There is a need for educators to have a deeper understanding of mental health needs, and how to embed emotional wellbeing for their students.[34] Adolescence compounds difficulties as mental health needs emerge – young people with learning disabilities are six times more likely to have a mental health problem than other children in the UK. Streissguth, in the USA,[35] has shown that the emotional wellbeing of children with FASD is particularly fragile, and leads to high rates of suicide in the teenage years/early adulthood. In Canada, this has led to the creation of specific curricula designed to address the unique learning needs of children with FASD. Similarly Schwarz states that young people with ASD are showing higher levels of depression and anxiety than their typically developing peers.[36] For deeper discussion of this issue, refer to articles by Carpenter,[37] [38] Mukerjee, Hollins and Turk,[39] and Blackburn, Carpenter and Egerton.[40]

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[30] Goswami, U. (2004) 'Neuroscience, education and special education,' *British Journal of Special Education,* 31 (4), 175–183.

[31] www.rarechromo.org

[32] Millar, R. and Barr, O. (2003) 'Parents of children with intellectual disabilities: Their expectations and experience of genetic counselling*', Journal of Applied Research in Intellectual Disabilities*, 16, 189–204.

[33] Bailey, D.B., Skinner, D. and Sparkman, K.L. (2003) 'Discovering fragile X syndrome: family experiences and perceptions', *Pediatrics,* 111 (2), 407–416.

[34] Carpenter, B. and Morgan, H. (2003) 'Count Us In: the role of schools and colleges in meeting the mental health needs of young people with learning disabilities', British *Journal of Special Education,* 30 (4), 202–206.

[35] Streissguth, A. (1997) *Fetal Alcohol Syndrome: A guide for families and communities.* Baltimore, MD: Paul H. Brookes.

[36] Schwarz, J. (2011) 'Academic performance and cognitive abilities in children with ASD', *CHDD Outlook*, 4.

[37] Carpenter, B. (2010) 'Navigators of learning', *Special!* (March), 22–23.

[38] Carpenter, B. (2011) 'Pedagogically bereft: improving learning outcomes for children with foetal alcohol spectrum disorders', *British Journal of Special Education,* 38 (1), 37–43.

[39] Mukherjee, R.A.S., Hollins, S. and Turk, J. (2006) 'Psychiatric comorbidity in fetal alcohol syndrome', *The Psychiatrist,* 30, 194–195.

[40] Blackburn, C., Carpenter, B. and Egerton, J. (2010) 'Shaping the future for children with foetal alcohol spectrum disorders', *Support for Learning,* 25 (3), 140–145.

Inconsistent learning profiles

It has become clear that there are children with new generation needs, who also present with complex and inconsistent learning profiles. These children are characterised by erratic, at times polarised, islets of attainment in different developmental areas of learning. For example, they might be working at national curriculum level 4–5 for literacy, yet at P6 for numeracy; or at level 3 for science, but at P5–6 for PSHE. Planning to meet such diverse needs within one child is a significant challenge to any educator, however skilled, experienced or talented. Even where a child has a positive and strong area of learning, the lack of interfacing support from other developmental domains (e.g. emotional) may make engaging them in a continuous learning dialogue difficult to achieve.

The challenge of CLDD

Many students with CLDD are disengaged from learning, whether actively or passively. Their often variable profile of need and attainment can easily result in a fragmented curriculum which lacks cohesion, congruence and continuity. Delivery of the curriculum to the child with CLDD needs to be sharp, focused, meaningful and purposeful, as well as balanced. The child has to see relevance and to find themselves truly engaged in a dynamic and coherent process of learning that makes sense to them.

To educate these 21st century children meaningfully, effectively and purposefully, any pedagogy needs to be within the framework of practice that currently exists in schools. The layers of pedagogy in the classroom therefore become: 'for all'; 'additional'; 'new, innovative and personalised'. The three components of new generation pedagogy are:

- Curriculum calibration
- Pedagogical reconciliation
- New and innovative teaching strategies.

Curriculum calibration

In curriculum calibration, the child's profile of need is critically reviewed, and their patterns of engagement profiled. A personalised curriculum experience is sought to match each strand of their learning need. We should not underestimate the magnitude of this challenge, which demands a significant shift in thinking and a more inquiry-based style of teaching rather than the curriculum driven styles of the last two decades.

What is clear, particularly in relation to the group of learners we describe as having CLDD, is that 'we must seek to build an inclusive curriculum...around adaptation, modification and design...that will be relevant to all learners'.[41]

Pedagogical reconciliation

This may require 'pedagogical re-engineering': adapting or adjusting an approach from our existing teaching repertoire. In this process, we carefully analyse the structure and components of other successful pedagogies in the field of special educational needs,[42] and

[41] Carpenter, B., Ashdown, R. and Bovair, K (eds) (2002) *Enabling Access: Enabling teaching and learning for children with learning difficulties (2nd edn).* London: David Fulton.

[42] Lewis, A. and Norwich, B. (2005) *Special Teaching for Special Children: Pedagogies for inclusion.* Milton Keynes: Open University Press.

match them to a new generation of children with CLDD. This is a process of analysis, deduction and refinement, reconciling those pedagogies to the unique profile of the learner with CLDD.

There is a compelling argument for strengthening the interface between neuroscience and education.[43] [44] Neuroscientific insights can greatly illuminate the process of pedagogical reconciliation.[45] Rona Tutt,[46] National Association of Head Teachers, writes:

> *Even with disorders that have a neurological basis, it is important to realise that the brain's plasticity and its considerable resilience means that there is always the potential to improve.*

The challenge for educators is how to translate this information into classroom practices, in which we seek, through practitioner-led, evidence-based approaches, new and innovative approaches to teaching that generate personalised curriculum pathways,[47] and meet the learning need of the student with CLDD.

For example:

- Recent research from Canada and Ireland[48] suggests that ADHD is a neurological disorder evidenced by a smaller frontal cerebellum. This, in turn, could raise the attainment of these vulnerable children as our teaching becomes better matched to their learning styles.

- While we know much about educating children with ASD (e.g. that they are predominantly visual learners), there are lessons emerging from neuroscience[49] [50] that demand detailed consideration.

- Fragile X syndrome is now the most commonly inherited genetic cause of learning disability in the UK, USA and many European countries. Here, again, there are teaching approaches which are not widely communicated or understood by the teaching profession.[51] Research insights, such as those from Japanese brain research looking at language functioning and impairment in the brains of children with Fragile X

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[43] Goswami, U. (2008b) Learning Difficulties: Future challenges, mental capital and well being project. London: Government Office for Science.
[44] Sousa, D.A. (2007) *How the Special Needs Brain Learns.* Thousand Oaks, CA: Corwin Press/Sage.
[45] Carpenter, B. (2010) 'Disadvantaged, deprived and disabled', *Special Children*, 193, 42–45; Carpenter, B. (2010) *Curriculum Reconciliation and Children with Learning Difficulties and Disabilties (Complex needs series).* London: SSAT.
[46] Tutt, R. (2009) 'Complex support', *Special!*, (July).
[47] Hargreaves, D.H. (2006) *A New Shape for Schooling?* London: SSAT.
[48] O'Malley, K. (2007) *ADHD and Fetal Alcohol Spectrum Disorders.* New York, NY: Nova Science Publications.
[49] Ramachandran, V.S. and Lindsay, M.O. (2006) 'Broken Mirrors: a theory of autism', *Scientific American*, November, 63–69.
[50] Carpenter, B. (2007) 'Moving forward'. In: Marsden, E. and Egerton, J. (2007) *Moving with Research: Evidence-based practice in Sherborne Developmental Movement.* Clent, Worcestershire: Sunfield Publications.
[51] Saunders, S. (2001) *Fragile X Syndrome: A guide for teachers.* London: David Fulton.

Syndrome,[52] provide new platforms for educators to plan creative and innovative learning pathways for children with these complex conditions.

An experienced special school headteacher wrote:

> *These children challenge us as teachers. They push our knowledge of curriculum and skills as teachers to their limits and beyond… We have to understand how their brains work and how we can help the rewiring of their brains.*

Creation of new and innovative teaching strategies

Alongside pedagogical reconciliation is the need to create and innovate a new pedagogy that is responsive to the new profile of learning need presented by this evolving cohort of children with CLDD. What are the teaching strategies that will enable us to engage this child as an active participant in the dynamics of our lesson, programme or learning environment?[53] We need specific interventions.

Establishing a new pedagogy

In the UK, we have spent the last 20 or more years focusing on the delivery of a curriculum. The resulting innovation in this time has genuinely broadened and enriched the learning framework for children with special educational needs. However we know these new generation learners do not fit into our current practices and systems. For these children with CLDD, we have to deepen our understanding of their learning styles and needs still further, and to establish a new generation pedagogy for this group of learners. How do we design learning environments and learning activities that will ensure that children with CLDD are active participants in all aspects of the learning process?

Central to this is the right of every child to be included as a learner within the curriculum, however great their degree of disability or learning difficulty. Article 29 on the United Nations Convention on the rights of the child recognises society's responsibility to develop a child's personality, talents and mental and physical abilities to their fullest potential through education.

The CLDD research project built on the principles of engagement for learning and personalisation to develop the CLDD Engagement for Learning Resource Framework.

Engagement for learning[54]

Without engagement, there is no deep learning, effective teaching, meaningful outcome, real attainment or quality progress.[55] Children with disabilities have consistently been

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[52] Hayashi, P. and Tonegawa, R. (2007) 'Genetics, language impairment and intervention', *Proceedings of the National Academy of Sciences*, 104 (27), 11489–11494.

[53] Wolke, D (2009) *Long term outcomes of extremely pre-term children: implications for early childhood intervention.* Paper to the Early Intervention Conference, Madrid, Spain (November).

[54] We would like to thank Tamara Brooks for allowing us to draw on her Ph.D. thesis for this discussion of engagement (see reference below).

[55] Carpenter, B. (2010) *Children with Complex Learning Difficulties and Disabilities: Who are they and what are their needs? (Complex needs series).* London: SSAT.

shown to engage for less time and at lower levels than their non-disabled peers.[56] This has serious implications for learning. Hume[57] writes:

> *When unengaged, students lose out on important learning opportunities and may become distracted, disruptive, or may demonstrate challenging behaviours.*

For students with disabilities, research has suggested that engaged behaviour is the single best predictor of successful learning.[58] According to McWilliam, Trivette and Dunst,[59] 'engagement sets the occasion for optimal learning to occur.' Keen describes engagement as 'a gateway to learning and…one of the best predictors for positive student outcomes.'[60] She also states 'the study of engagement has the potential to assist educators and therapists to maximise learning outcomes.'[61] Therefore an approach to teaching and learning based upon levels of engagement seemed particularly pertinent for student with CLDD.[62]

The engagement approach

Children with CLDD need to be taught in ways that match their individual learning styles by educators who recognise their abilities and potential for engagement in learning. Our work must be to transform children with CLDD into active learners by releasing their motivation, unlocking their curiosity and increasing their participation. Key to this are relationship processes – warmth, sensitivity and responsiveness. From there the child becomes engaged, and their personalised learning journey begins. A focus on engagement can underpin a process of personalised inquiry through which the educator can develop effective learning experiences. Using evidence-based knowledge of a child's successful learning pathways, strategies can be identified, high expectations set, and incremental progress recorded on

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[56] Bailey, D.B., McWilliam, R.A., Ware, W.B. and Burchinal, M.A. (1993) 'Social interactions of toddlers and preschoolers in same-age and mixed-age play groups', *Journal of Applied Developmental Psychology*, 14 (2), 261–276; McCormick, L., Noonan, M.J. and Heck, R. (1998) 'Variables affecting engagement in inclusive preschool classrooms', *Journal of Early Intervention*, 21 (2), 160–176; McWilliam, R.A. and Bailey, D.B. (1995) 'Effects of classroom social structure and disability on engagement', *Topics for Early Childhood Special Education*, 15 (2), 123–147;

[57] Hume, K. (2006) 'Get engaged! Designing instructional activities to help students stay on task', *Reporter*, 11 (2), 6–9.

[58] Iovannone, R., Dunlap, G., Huber, H. and Kincaid, D. (2003) 'Effective educational practices for students with autism spectrum disorders', *Focus on Autism and Other Developmental Disabilities,* 18, 150–166; Katz, J. and Mirenda, P. (2002) 'Including students with developmental disabilities in general education classrooms: educational benefits', *International Journal of Special Educational Needs,* 17 (2). [Online at: http://www.internationaljournalofspecialeducation.com/articles.cfm?y=2002andv=17andn=2; accessed: 1.7.2011]

[59] McWilliam, R.A., Trivette, C.M. and Dunst, C.J. (1985) 'Behavior engagement as a measure of the efficacy of early intervention', *Analysis and Intervention in Developmental Disabilities*, 5 (1–2), 59–71.

[60] Keen, D. (2008) 'Engaging children with autism in learning activities', *Griffith Institute for Educational Research*, 1 (2), 1–3.

[61] Keen, D. (2009) 'Engagement of children with autism in learning', *Australasian Journal of Special Education*, 33 (2), 130–140.

[62] Brooks, T. (2010) 'Developing a learning environment to support children with profound autistic spectrum disorder to engage as effective learners' (Ph.D. thesis). Worcester: University of Worcester.

their journey towards optimal engagement in learning. Their engagement will be the benchmark for assessing whether we have achieved this goal.[63]

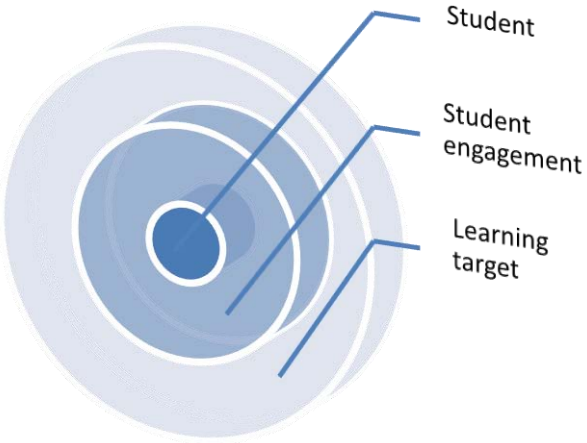

Diagram showing the relationship between engagement and learning

Personalising learning

Children with CLDD require something more than differentiation – the process of adjusting teaching to meet individual needs.[64] But what can that be? High quality differentiation should be the hallmark of high quality special education. The creative differentiated learning routes arising from special educational needs settings over the past two decades (e.g. extended programmes of study) have demonstrated this abundantly.[65] Differentiation has served us well in meeting a whole range of special educational needs for children. However, for children with CLDD, we need an additional ingredient – the process of personalisation.[66] While differentiation takes us helpfully along a pathway that focuses on the child's individual needs, it is the process of personalisation that envelopes the child as an engaged learner. Optimal engagement will produce better outcomes and secure attainment, and register meaningful progress for these children. All this is part of the fundamental dynamic in this project of devising and creating personalised learning pathways for children with CLDD that genuinely touch them at their point of learning need.

As the PMLD Network states,[67] 'the personalisation agenda has the potential to transform the lives of people with PMLD'. This is true for all those with CLDD. Special schools need to

[63] Carpenter, B. (2010) *Children with Complex Learning Difficulties and Disabilities: Who are they and what are their needs? (Complex needs series).* London: SSAT.
[64] Porter, J. and Ashdown, R. (2002) *Pupils with Complex Needs: Promoting learning through visual methods and materials.* Tamworth: NASEN.
[65] Carpenter, B., Ashdown, R. and Bovair, K (eds) (2002) *Enabling Access: Enabling teaching and learning for children with learning difficulties (2nd edn).* London: David Fulton.
[66] Hargreaves, D.H. (2006) *A New Shape for Schooling?* London: SSAT.
[67] PMLD Network (2008) 'PMLD Network response to valuing people now'. [Online at: http://www.pmldnetwork.org; accessed: 26.7.11]

become pedagogical think-tanks[68] – nurturing, shaping and framing approaches that are dynamic and innovative, and that transform these children into active participants in the process of learning.

As Hargreaves[69] suggests, schools need to '…transform their response to the learner from the largely standardised to the profoundly personalised.' Personalising learning enables us to mould the learning experience directly around the child with CLDD. To do this we have to discover the learning needs and pathways of these very diverse children, and establish their learning capacity and learning effectiveness. Cartwright[70] observes:

> *This is on a range of levels – caring for their social and mental health needs and their educational needs. Sometimes this means we need to decide what is of overriding importance at any given time (i.e. deciding what their most important need is, and wrapping the curriculum around that need).*

A focus on engagement can underpin a process of personalised inquiry through which the educator can develop effective learning experiences and remove barriers to learning. Using evidence-based knowledge of a student's already successful learning pathways, aptitudes and interests, strategies can be identified, high expectations set, and incremental progress recorded on their journey towards optimal engagement in learning.

What are the teaching strategies that will enable us to engage children with CLDD as active participants in the dynamics of our lessons, programmes or learning environments? The overall goal of the pedagogy is 'engagement for learning'. Our quest is to engage the learner with CLDD in their environment. Our challenge is how to achieve engagement. How do we recognise when a child is engaged? How do we measure engagement? How do we chart its outcomes? The educator must remain committed to engagement for learning as a core tenet of curriculum experience for the child with CLDD. The permutations of special educational needs presented by some children can send an educator off at a pedagogical tangent or embroil them in a level of detail not helpful to the learning process. With engagement as a focus, the practitioner is armed to transcend these complexities.

Hartley[71] goes on to say: 'The key question is how collectively we build this offer for every pupil and every parent.' It is hoped that the CLDD Engagement for Learning Resource Framework goes some way to meeting this challenge.

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[68] Carpenter, B. (2010) *A Vision for 21st-Century Special Education (Complex needs series).* London: SSAT.
[69] Hargreaves, Ibid.
[70] Cartwright, C. (2010) 'Response to Think Piece 2'. [Online at: http://blog.ssatrust.org.uk/thinkpiece/?p=16#comments; accessed: 25.5.10]
[71] Hartley, R. (2010) *Teacher Expertise for Special Educational Needs: Filling in the gaps* (Research note: July). London: Policy Exchange.

TOWARDS DEFINING COMPLEX LEARNING DIFFICULTIES AND DISABILITIES

There is currently no single endorsed definition of Complex Learning Difficulties and Disabilities (CLDD), although student complexity has long been recognised among educationalists, both teachers and inspectors, when describing the new group of most challenging learners in our schools. A 2008 Ofsted inspection report for a community special school states:

> *The proportion of pupils with more complex needs has grown in recent years and a rising number of these pupils are now in the secondary section of the school.*

Porter and Ashdown[72] define students with complex needs as:

> *...a wide and varied group of learners...who do not simply require a differentiated curriculum or teaching at a slower pace, but who, at times, require further adaptation to teaching if they are to make progress.*

Dee et al.[73] describe them as children and young people with: '...a complex aggregation of difficulties in more than one area of [their] lives'. Other definitions refer to two or more disabling conditions that 'co-exist',[74] 'overlap'[75] or 'co-occur'.[76]

Medical practitioners use the term, 'co-morbidity'. In practice, this could mean children with Down's syndrome and mental health needs, with Noonan's syndrome and physical disability, with cerebral palsy and visual/hearing impairments (due to premature birth) or with Autistic Spectrum Disorders (ASD) and Attention Deficit Hyperactivity Disorder (ADHD).

However, as PMLD Network notes in their response to *Valuing People Now,* 'lack of accurate information and consistency in definitions of need make longer term service planning and development difficult'.[77]

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[72] Porter, J. and Ashdown, R. (2002) *Pupils with Complex Needs: Promoting learning through visual methods and materials.* Tamworth: NASEN.
[73] Dee, L., Byers, R., Hayhoe, H. and Maudslay, L. (2002) *Enhancing Quality of Life: Facilitating transactions for people with profound and complex needs*. London: SKILL/University of Cambridge.
[74] Visser, E. (2009) 'Review of learning difficulty and disability (LDD): an Ofsted perspective'. Keynote presentation to the Croner's 4th Annual Special Needs Conference, London (January).
[75] Dittrich, W.H. and Tutt, R. (2008) *Educating Children with Complex Conditions: Understanding overlapping and co-existing developmental disorders*. London: Sage Publications.
[76] Rose, R., Howley, M., Fergusson, A. and Jament, J. (2009) 'Mental health and special educational needs: exploring a complex relationship', *British Journal of Special Education,* 36 (1), 3–8.
[77] 'PMLD Network (2008) 'PMLD Network response to valuing people now'. [Online at: http://www.pmldnetwork.org; accessed: 26.7.11]

The wide ranging debate with CLDD project steering board and advisors, CLDD educators within and outside the research project and stakeholder groups including learning disability charities, resulted in the development of the following definition:

Definition of Complex Learning Difficulties and Disabilities

Children and young people with Complex Learning Difficulties and Disabilities (CLDD) have conditions that co-exist. These conditions overlap and interlock creating a complex profile. The co-occurring and compounding nature of complex learning difficulties requires a personalised learning pathway that recognises children and young people's unique and changing learning patterns. Children and young people with CLDD present with a range of issues and combination of layered needs – e.g. mental health, relationships, behavioural, physical, medical, sensory, communication and cognitive. They need informed specific support and strategies which may include transdisciplinary input to engage effectively in the learning process and to participate actively in classroom activities and the wider community. Their attainments may be inconsistent, presenting an atypical or uneven profile. In the school setting, learners may be working at any educational level, including the National Curriculum and P scales. This definition could also be applicable to learners in Early Years and post-school settings.

This definition of CLDD was developed in consultation with a wide variety of educators and other stakeholders. Discussions and revisions took place on the following dates:

10 December 2009: Advisory Group induction day
18/19 January 2010: Development schools briefing day
3 March 2010: Stakeholder information day
16 March 2010: CLDD Steering Board Meeting
26 April 2010: Development schools meeting day
6 July 2010: Advisory group meeting
10 July 2010: CLDD Steering Board Meeting

Summary of discussions which informed the final project definition

- ***Children and young people with Complex Learning Difficulties and Disabilities (CLDD) have conditions that co-exist. These conditions overlap and interlock creating a complex profile.***

Contributors felt it was important to emphasise the ways in which co-existing disabilities could affect one another. Many of the co-existing difficulties and disabilities have recognised educational practices associated with them, but one or more overlapping and interlocking conditions can impact in a way that recognised approaches to teaching and learning are not effective.

- ***The co-occurring and compounding nature of complex learning difficulties requires a personalised learning pathway that recognises children and young people's unique and changing learning patterns.***

Children with CLDD are often disengaged from learning and do not respond to teaching approaches which engage most other students. It is therefore necessary to focus upon developing personalised learning pathways which will enable students to connect with the learning experience.

- ***Children and young people with CLDD present with a range of issues and combination of layered needs – e.g. mental health, relationships, behavioural, physical, medical, sensory, communication and cognitive.***

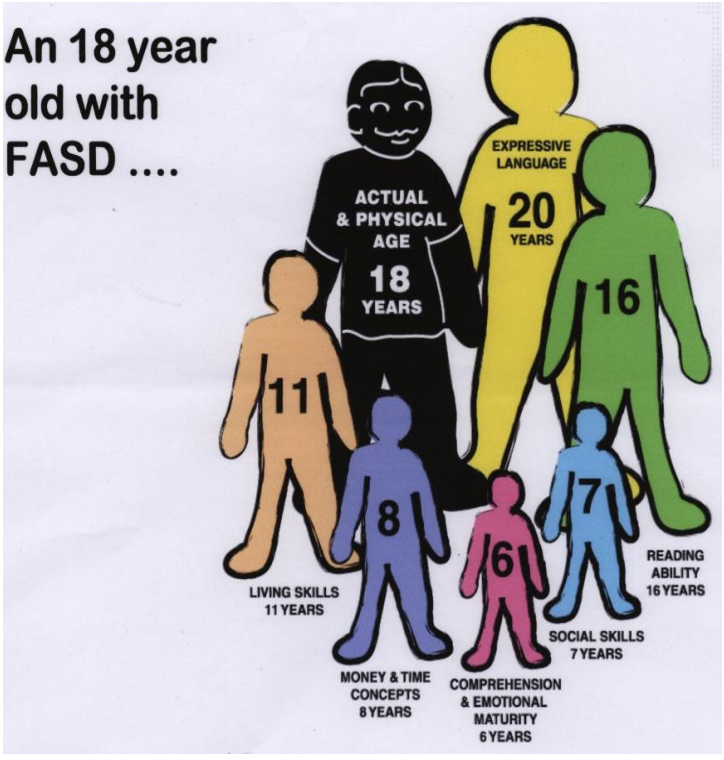
There was much discussion about what should be included among the examples. Those discussing the definition wanted to emphasise the holistic perspective needed by those who were working with students with CLDD. It was considered whether there should be specific mention of augmented communication. However, by doing so, there would be a danger of excluding some groups of students.

- ***They need informed specific support and strategies which may include transdisciplinary input to engage effectively in the learning process and to participate actively in classroom activities and the wider community.***

The need for support in learning from practitioners from a range of disciplines was a common feature of children with CLDD. However, not all students with complex needs have access to appropriate levels of support. Those discussing the definition wanted to emphasise the importance of transdisciplinary support to add value to its effectiveness for the student.

- ***Their attainments may be inconsistent, presenting an atypical or uneven profile.***

One of the common features of learning profiles of students with CLDD was that they were not just uneven, but 'spiky', with extreme developmental differences. This illustration (© FASD Trust / Jodee Kulp, www.betterendings.org) shows what this might look like for a young adult with FASD.



- ***In the school setting, learners may be working at any educational level, including the National Curriculum and P scales.***

Initially, the CLDD research project followed the Department for Education definitions for severe learning difficulties and for profound and multiple definitions in identifying an upper level of attainment for students with CLDD. However, discussions with educators and other professionals revealed that students with complex needs were working at all educational levels.

- ***This definition could also be applicable to learners in Early Years and post-school settings.***

With the Government's commitment to a seamless transition from the early years into adulthood for students with CLDD, it was important that this definition of CLDD could be applied universally. It was hoped that by making this explicit, the need for support would be emphasised.

Finding a definition of CLDD which is applicable to international settings

As the definition for CLDD also needed to be applicable to the international schools which were hosting the CLDD research, in consultation with the stakeholder groups the following sentence was added to the core definition:

'This specifically applies to England, but might be relevant to the curriculum context of other countries.'

RECOMMENDATION 1

Evidence from this research has defined the population of children with Complex Learning Difficulties and Disabilities. We recommend that Local Authorities adopt a national definition of Complex Learning Difficulties and Disabilities in developing provision and reporting trends to National Government.

METHODOLOGY OVERVIEW

Summary of main research activities

Phase 1 (September 2009–August 2010) – Development phase

- Literature overview
- Identification and briefing of participants for Phases 1 and 2
- Gaining participant (student and staff)/parent/carer permissions for inclusion in the research project
- Collaboration with development school practitioner researchers on data collection and analysis
- Develop and refine briefing packs on commonly coexisting conditions in students with CLDD
- Develop and refine personalised learning resources – Engagement Profile and Scale; Inquiry Framework for Learning
- Develop project website
- Consultancy and support visits from project advisors / steering board
- Data collection and analysis in association with development schools
- Dissemination/briefing activities (e.g. conferences, briefing days, etc.)

Phase 2 (September–December 2010) – SEN trial phase

Development schools

- Exit interviews
- Collection of any additional video material for training
- Additional permission from parents for publication of material)
- Collection of 'Promising practice for CLDD student'
- Data analysis and write up in collaboration with development schools
- Dissemination and briefing events (e.g. conferences)

SEN trial schools

- Two half-day visits to and/or further briefing of Phase 2 trial schools by the research team
- Telephone/email support and advice for trial schools
- Data collection and analysis in collaboration with trial schools
- Exit interview

Mainstream trial settings

- Identification and briefing of mainstream settings for Phase 3 (October–December 2010)
- Identification of students

- Gaining participant (student and staff)/parent/carer permissions for inclusion in the research project

Mainstream trial (January–March 2011)

- Three-four half-day visits to and/or further briefing of Phase 3 trial schools by the research team
- Telephone/email support and advice for trial schools
- Data collection and analysis in collaboration with trial schools
- Exit interviews
- Gaining any additional permission needed
- Dissemination and briefing events (e.g. conferences)

Methodology

This project used an exploratory, multiple case study approach[78] to provide insight into effective approaches for supporting the engagement for learning of students with CLDD (including those with PMLD) in special education, mainstream and early years settings. It utilised action research methodologies which are compatible with evidence-based enquiry to develop appropriate educational resources promoting the engagement for learning of students with CLDD. These approaches are well documented as successful in schools, lending themselves to practitioner-led research in dynamic, work-based situations. Common and consistent methodology and data collection was promoted through weekly core research team meetings, and regular research briefing meetings for schools during the development phase. In the SEN, mainstream and early years trials, the participant schools were briefed about how to use the materials, but the emphasis was upon schools' own implementation of the resources developed and the resources' practical application in everyday settings.

The project methodology was approved by the SERC at the University of Northampton, and quality assured by David Braybrook, an experienced practitioner in sensory impairment/speech, language and communication difficulties, and a member of SENDIST and tribunals for other allied professions, who reported to the project's Steering Board.

Research team

The core research team included the project director, research officer, and four research assistants with representative backgrounds in complex learning disabilities (including specialisms in psychology, neuroscience, mental health, disability, research, curriculum and families) who worked closely with practitioner researchers in schools. The research team were supported by a multidisciplinary team of advisors experienced in SEN, who also visited schools, and a steering board which included representatives from key stakeholder groups.

Participants

An invitation to schools to become part of the CLDD Research Project was advertised among the Specialist Schools and Academies Trust's affiliated schools for Phase 1 (Development

[78] Stake, R. E. (2005) *Multiple Case Study Analysis*. New York: Guildford Press.

phase), and nationally through nasen's journal, *Special!,* for Phase 2(a) (UK SEN trial phase). Based on quality of application, schools were purposely selected to take part. As well as on merit, they were chosen to be representative of as wide a range of SEN and curriculum specialisms, geography, demography and social diversity as possible. Phase 2(b) international SEN trial schools, and Phase 3 mainstream and early years settings, were recruited through individual invitation based upon preliminary scoping conversations with the research director. Schools in all phases were asked to nominate a lead practitioner researcher to liaise between their allocated research assistant and the other educators taking part in the project.

Within school roles of practitioner researchers involved in phases 1–3

	SEN development schools (n=12)	**UK SEN trial schools** (n=50)	**International SEN trial schools** (n=14)	**Mainstream trial schools** (n=12)	**Early years trial settings** (n=2)
Headteacher	1		1		
Deputy headteacher	4	8	4	1	
Assistant headteacher	1	8			
SENCO				3	
Class/subject teacher/equivalent	5	33	9	5	2 (+2 shared role)
Teaching assistant		1		3 (+2 shared role)	
Therapist	1 (SALT)	1 (SALT)	1 (Music)		

The following participants were recruited (for a list of research schools across all phases, see Appendix 1):

Phase 1
Twelve development schools (January-August 2010). The research team selected five students from up to ten proposed by the school to take part in the project. Students were selected to represent as wide a range of CLDD as possible within the whole research participant group.

Phases 2 and 3
Phase 2(a): 50 UK SEN trial schools / Phase 2(b): 15 international SEN trial schools (September–December 2010)
Phase 3: 12 mainstream trial schools / 2 early years settings
Schools each proposed two students, to be agreed with their allocated research assistant, to take part in trialling the resources developed during Phase 1.

The students proposed were selected according to closeness of fit with recruitment criteria (see following section):

- Fell within the project's working definition of CLDD
- Had a Statement of Special Educational Need (or equivalent) in which there was a stated diagnosis of comorbidity corroborated through one or more professional reports.

After students had been identified to take part in the project, fully informed permission at an appropriate level was sought from schools, teaching staff, parents and students for their involvement.

Development of research resources

The three resources in the CLDD Engagement for Learning Resource Framework were developed based on a reading of relevant literature around CLDD, developing personalised learning pathways and engagement.

CLDD briefing packs

Prototypes of CLDD Briefing Packs for schools were developed which consisted of three levels of information – the briefing sheet (4–6 sides A4) gave basic introductory information for practitioners together with leads to further information; the classroom support sheet (2 sides A4) for on-the-spot reference in a classroom situation; and the information sheet (8–12 sides A4), which gave more in depth information and further references to follow up.

Engagement Profile and Scale

The prototype of the 'Engagement Profile and Scale' was a concept initiated by Professor Barry Carpenter, and further developed by the whole CLDD research team in consultation with Dr Barry Coughlan, Clinical Psychologist responsible for the doctoral programme at the University of Limerick.

The Engagement Profile and Scale encourages student-centred reflection, supporting educators to develop learning experiences and activities around students' strengths and interests. By breaking down 'engagement' into seven elements – awareness, curiosity, investigation, discovery, anticipation, persistence and initiation – the Engagement Profile and Scale enables educators to personalise activities for the student in a way which will invite their engagement. It thus also gives students a voice (even if the student cannot articulate this themselves) in establishing 'the way I can learn' as educators' begin to customise their teaching from the student's perspective.

Inquiry Framework for Learning

The Inquiry Framework for Learning was developed in consultation with development school educators (April–July 2010) based upon pathways of inquiry which resulted in successful learning outcomes for their students with CLDD. Educators logged and systematically explored the questions that they asked themselves when confronted by the challenges of engaging a student with CLDD in learning. These questions were incorporated into the Inquiry Framework for Learning – an online resource which proposes questions as starting points for practitioners to explore the learning pathways for students with CLDD.

Phase 1: Developing the resources (January–August 2010)

Following two research briefing days for schools, the research assistants visited schools two out of every three weeks during term time to work alongside the practitioner researchers and participating educators using and adapting the resources with the students selected for the project. Baselining of students and introduction of the resources took place February–March 2010. The resources were then used systematically with students during April–July

2010. The resources were modified based on suggestions made by schools in discussion with the core research team.

Phase 2: Trialling the resources – special education – effectiveness and design modification focus (September–December 2010)
Fifty UK special schools and 15 international special schools were selected to trial the CLDD Inquiry Framework for Learning developed during Phase 1 and feed back their responses. They were allocated a research assistant, research officer or research advisor to support them during this phase through two visits at the beginning and end of the phase and telephone and email. (Australian schools relied upon remote contact by Skype or phone.)

Phase 3: Trialling the resources – mainstream education – effectiveness and design modification focus (January–March 2011)
Twelve mainstream schools – six primary and six secondary – and two mainstream settings trialled the CLDD Engagement for Learning resources, modified as a result of the SEN trial phase. These settings received three to four visits from researchers, and, again, telephone and email support.

Data collection and analysis
This is presented as a separate section prior to the presentation of results (see p. 39).

Validity / triangulation / inter-rater reliability
The University of Northampton SERC approved the research methodology as being appropriate to the project's stated aims, objectives and proposed outcomes. The research methodology was shared across a number of different settings (12 SEN development schools / 65 SEN trial schools / 12 mainstream schools / two early years settings) with varied SEN, geographic and socio-economic profiles. The briefing days held prior to and during (three in all) Phase 1 ensured that participants and research team shared common research aims, objectives, procedures, and goals. This exchange of information was sustained through regular meetings between schools and research assistants, and the core research team. In Phases 2 and 3, participants took part in a research induction day, received 2–4 face-to-face visits and maintained contact with their allocated researcher during the research period. Triangulation was variously provided by collecting data from complementary sources including formal and informal perspectives from families, educators and colleagues from other professions, student support team meetings and discussions, observation (participant, non-participant and video), documentary evidence, and informal research journals. Interrater reliability in Phase 1 was provided by research assistants and colleagues working collaboratively with the students.

The research team had access to a group of specialist advisors, and were accountable to the project Steering Board, which guided the research. These are detailed earlier in the report.

Facilitation of student voice

Facilitation of the student voice was important for the CLDD research project. Students' own permission for them to take part in the research were sought through a means appropriate to their preferred method of communication, including sharing video. Selected students were interviewed to gain their insights into what CLDD means to them in day-to-day life, and how interventions affected their learning. The student voice in learning was facilitated by detailed educator focus on student strengths, interest and perspective (mediated where necessary by others who knew them well) in developing effective learning pathways.

Fully informed consent of participants

The ethics of working with children in research is recognised as an area in which sensitivity is required, and the National Children's Bureau (NCB) *Research Guidelines*[79] and the British Educational Research Association (BERA)[80] guidelines has informed the research approach. Written permission from prospective research participants (school headteachers, educators, students and the students' legal guardians) for their involvement in the research was sought only after detailed and open written project information was provided to them and the schools had ensured that as far as possible their consent was fully informed in relation to their level of understanding. This included the following:

- Participants were explicitly informed about their rights – to ask questions and receive satisfactory answers at any time, to withdraw from the research at any time without adverse consequences, to review any data or other information held about them, to receive information about project results, outcomes and dissemination.
- It was made clear how the data would be collected, who would have access to data held about research participants, and how the data would be stored and used. Specific permission to video and audio record students was also obtained.
- The steps taken by researchers to ensure participants' anonymity were explained.
- Participants were given contact details for the researcher.

The permission of all prospective participants to participate was freely given and not coerced. It was given specifically for the research culminating in the research report, resource materials, and dissemination of that research, and not for any future purpose. The details of the form of consent for specific research activities taking place, together with the people involved, will be recorded on a secure electronic database.

Confidentiality and data protection

Data collected in the course of the research is subject to data protection procedures. During Phase 1, a confidentiality and data protection agreement between the research participants and researchers covering the collection and use of raw data was signed. Phase 2 and 3 schools received a copy of the CLDD research project's ethical code, but as they were trialling resources, and data they were collecting was already within the schools' domains, the schools' policies around confidentiality and privacy were considered to cover this use,

[79] National Children's Bureau (2003) *Guidelines for Research.* [Online at http://www.ncb.org.uk/dotpdf/open%20access%20-%20phase%201%20only/research_guidelines_200604.pdf; accessed: 1.7.2011]

[80] British Educational Research Association (2004) *Revised Ethical Guidelines for Educational Research.* [Online at http://www.bera.ac.uk/files/guidelines/ethica1.pdf; accessed: 1.7.2011]

and participants were not required to sign agreements. Data used has been anonymised unless there is express permission otherwise, and, at the end of the project, non-essential raw data will be destroyed. Raw data has been kept at all times with due regard to confidentiality, and was not shared with anyone outside the core research group without explicit and specific permission from the participants concerned.

All the student names used in this report are pseudonyms to help protect their identities.

IDENTIFICATION OF STUDENTS FOR INCLUSION IN THE PARTICIPANT GROUP

Criteria for student inclusion in the CLDD research project

Each trial school participating in the CLDD research project was asked to propose students with CLDD, including those with PMLD, to be 'case study' students:

Phase 1 – 60 students: five students from each of 12 UK special schools
Phase 2 – 130 students: two students from each of 65 special schools (50 UK special schools; 15 international special schools)
Phase 3 – 28 students: two students from each of 12 mainstream schools (six primary and six secondary) and two early years settings.

Schools were asked to select students for participation in the CLDD research project using the following three criteria:

- A Statement of Special Educational Need (SSEN) or international equivalent
- More than one diagnosed condition contributing to their complexity of need (e.g. primary and secondary disabilities, mental health, medical condition, etc.) as identified in an SSEN and/or professional reports
- Professionals from more than one discipline and/or agency involved in their education/care (e.g. educators, therapists, medical consultants, psychologists, etc.) on an on-going basis.

Once the 'case study' students had been proposed, permission for them to take part in the research project was formally asked of families/carers and the student themselves insofar as they were able to understand and give consent.

The schools completed a 'Student information form' for each student (see Appendix 2), including details of the student's conditions. For students in Phase 1, the research assistants corroborated and extended the information on these forms from documentary evidence held in the students' personal files. In Phases 2 and 3, the conditions were taken from 'Student information forms' alone due to time constraints.

Participant attrition

Development schools *(January–August 2010)*

All twelve development schools which enrolled in the research project completed the research phase.

SEN Trial schools *(September–December 2010)*
Of the 51 UK special schools which enrolled for the UK SEN trial phase, 50 schools completed the research period, but one school withdrew before the beginning of the phase.

Of the 15 international special schools which enrolled, all completed the research period, with one extending the period of intervention.

Mainstream schools / Early years settings *(January–March 2011)*
All schools and settings completed the period.

Frequency of conditions co-existing among development and SEN trial school students
The tables in Appendix 3 summarise the types of conditions and their prevalence among the CLDD research project participants. The conditions were broadly grouped into the following five categories:

1. Learning difficulty/disability classification (e.g. moderate learning difficulties (MLD), severe learning difficulties (SLD), global developmental delay)
2. Specific conditions/disorders (not rare)
3. Rare syndromes and chromosomal disorders
4. Physical and medical conditions
5. Other learning difficulties (e.g. developmental, processing, social, emotional wellbeing, etc.).

It is important to note that the recorded prevalence of reported conditions, disabilities and difficulties among project participants depended upon a number of variable factors, among them:

- Local authority (LA) policy on diagnosis (e.g. one LA reportedly had a policy of not identifying more than one condition in SSENs, whereas others identified multiple conditions and difficulties)
- Differing use of terminology (either general or precise) used to describe diagnoses (e.g. 'physical disability' or 'severe medical conditions' instead of or in addition to more specific descriptors)
- Detailed diagnostic and assessment information in some students' paperwork may reflect the tenacity of parents and other involved professionals in gaining this; a lack of diagnostic and assessment detail on other students' may not be evidence of a lack of complexity
- Some schools in completing the student information sheet itemised the difficulties associated with a particular diagnosis, while others allowed the diagnosis to stand for its associated profile of difficulties
- The commitment of the person completing the Student information form to accuracy and detail.

For the above reasons, it was felt that discussion around the implications of the count frequencies of difficulties/conditions per student would not be useful. However, as an overview:

Phase 1
UK development schools: 60 students; no. for whom information: 60
Range of different conditions / identified difficulties per student: 1 to 18
(mean: 6; median: 4; mode: 4)

Phase 2 (a)
UK trial schools: 100 students; number for whom information: 96
Range of different conditions / identified difficulties per student: 1 to 18
(mean: 4; median: 4; mode: 3, 6)

Phase 2 (b)
International trial schools: 30 students; number for whom information: 30
Range of different conditions / identified difficulties per student: 1 to 17
(mean: 5; median: 5; mode, 3)

Phase 3
Mainstream/early years trial settings: 28 students; number for whom information: 25
Range of different conditions / identified difficulties per student: 1 to 17
(mean: 4; median: 3; mode: 3)

In all phases, SEN schools proposed students in the participant group who did not have more than one disability listed on their SSEN or more than one type of non-educational professional involved in their support. In Phases 1 and 2, the schools argued that these students were among their most complex. In the mainstream phase, as one would expect, the complexity of students was less. Some students who did not have an SSEN, but who nonetheless challenged mainstream educators in their school, were included in the Phase 3 participant group.

Comparing the profile of identified conditions and learning difficulties in different phases

1. Learning difficulty/disability classification

In both these participant groups, the most prevalent learning difficulty classifications were severe learning difficulties (Ph1: 17; Ph2(a): 23) and global developmental delay (Ph1: 17; Ph2(a): 21). Profound and multiple learning difficulties was the next most frequent classification in both groups (Ph1: 7; Ph2(a): 9). In Phase 1, with descending numbers of students in each category, were unspecified 'learning difficulties' (5), cognitive delay (2), moderate learning difficulties (2) and 'multiple learning difficulties' (1). In Phase 2, the categories following 'Profound and multiple learning difficulties' with descending numbers of students were moderate learning difficulties (6), cognitive delay (3), complex learning needs (2) and neurodevelopmental delay (1).

Among the international SEN student group, those designated as having global developmental delay (10) and intellectual disability (10) were the most numerous, followed by severe learning difficulties (4), moderate learning difficulties (2) and PMLD (1). The low

number of PMLD and SLD designations were surprising as descriptively many of the students would have come within that category. This may suggest international differences in terminology and designation.
The complex mainstream/early years group showed reduced numbers of students with a learning difficulty/disability classification. Only three were designated as having global developmental delay, and two as having moderate learning difficulties.

2. Specific conditions/disorders (not rare)

There were similarities in the profile of conditions amongst Phases 1 and 2 (a+ b). Autism / autistic spectrum disorder was the most prevalent (Ph1: 13; Ph2(a): 29; Ph2(b): 8) followed by attention deficit / hyperactivity disorder (Ph1: 8; Ph2(a): 12; Ph2(b): 2). The Phase 1 group did not have any students with Down syndrome, although there were 11 in the Phase 2(a) group, and one in the Phase 2(b) group. Phase 1 and 2(a) groups both had students with fetal alcohol syndrome, although in the first only one was confirmed. In Phase 1, there were individual students who had the following conditions: Fragile X Syndrome (1), Tourette's syndrome (1), and 'undiagnosed disability' (1). In Phase 2 (a), there were individual students with brain trauma at birth, substance effects and 'undiagnosed disability'. There were no further specific conditions diagnosed among the international SEN student group.

As might be expected the numbers of students with ADHD in Phase three were proportionately more apparent (6) and similar to numbers of those with autism / autistic spectrum disorder (5). This phase also included students with Asperger syndrome (4). There were single instances of students with fetal alcohol spectrum disorder (unconfirmed), fragile-X and Tourette's syndromes, and 'hyperkinetic disorder'. Two students were described as having 'undiagnosed disability'.

3. Rare conditions / chromosome disorders

Among the 60-strong, Phase 1 participant group, there were 18 different rare conditions / chromosome disorders; whereas among the 96 Phase 2 (a) students, there were 11 rare conditions and Phase 2(b) there were eight within 31 students. Most were represented by single children, although in the Phase 1 group, there were two students with Peters Plus syndrome and two with tuberous schlerosis; in the Phase 2(a) group, there were two with Phelan McDermid syndrome. Phase 2(a+b) groups eachhad a student with Wolf-Hirschhom syndrome. There were no students who had rare conditions/chromosome disorders in the mainstream/early years Phase 3 group.

4. Physical / medical conditions

Physical / medical conditions had the largest number of different examples in both Phase 1 and Phase 2 (a+b) groups – 31, 45 and 31 respectively. In Phases 1 and 2(a), epilepsy (Ph1: 23; Ph2(a): 29), visual impairment (Ph1: 17; Ph2(a): 29) and cerebral palsy (Ph1: 14; Ph2(a): 20) were the most common conditions in both groups, whereas in Phase 2(b), the most numerous conditions identified were visual impairment (13), epilepsy (8) and premature birth (6). Phase 1 had a larger group of students with identified motor difficulties (18), whereas there were eight in the Phase 2(a) and five in Phase 2(b). Students with hearing impairment were represented by six students in Phase 1, six in Phase 2(a) and four in Phase 2(b). Whereas the Phase 1 group had only one student identified as having had a premature birth, this was the case for five of the Phase 2(a) students, and six in Phase 2(b).

For the mainstream/early years Phase 3 group, the most common physical/medical conditions identified were cerebral palsy (3) and motor difficulties (3). None of those selected for inclusion in the project had epilepsy. Two students each had visual and hearing impairment, and one had had a premature birth.

There were students with other physical/medical conditions in all phases, but those above were considered most notable in the context of this research project.

5. Other difficulties

(including non-specific developmental, processing, social and emotional wellbeing difficulties)

The identification and description of 'other difficulties' tended to be less formalised across all phases. However, in terms of numbers of different difficulties identified among students in each of the five categories, this was the largest Phase 3 category.

In common with national UK findings, the most commonly occurring non-specific difficulty at every phase was speech, language and communication needs (SLCN) – 26 students in Phase 1, and 36 in Phase 2(a), 8 in Phase 2(b) and 14 in Phase 3. In Phases 1 and 2(a), SEBD/BESD/challenging behaviour was the next most frequent difficulty among students (Ph1: 17; Ph2(a): 14), although for the other phases BESDs (Ph2(b): 5; Ph3: 2) were less represented than other difficulties. In Phase 2(b) self-help and personal care difficulties (8), and in Phase 3 social interaction difficulties (3) and attachment disorders (2), were more apparent among students than BESD.

One school for students with BESD commented on the CLDD designation for their group of students:

> *For teachers to see that our students are included in that category of complex difficulty is helpful… It is the hidden disability… These kids do have complex needs.* (Deputy headteacher, development school)

Difficulties also represented across all phases were sensory processing difficulties (Ph1: 6; Ph2(a): 10; Ph2(b): 1; Ph3: 2), self-esteem issues (Ph1: 8; Ph2(a): 3; Ph2(b): 0; Ph3: 1) and attachment disorders (3 in each). Although there were few students who had formally acknowledged mental health issues (Ph1: 2; Ph2(a): 1; Ph2(b): 0; Ph3: 2), demonstrably in Phase 1 (see p. 125), and anecdotally in other phases, prevalence was higher. These groups also had students with anxiety / psychiatric disorders (Ph1: 8; Ph2(a): 5; Ph2(b): 2; Ph3: 0), including obsessive compulsive disorder (Ph1: 3; Ph2(a): 3; Ph2(b): 1; Ph3: 1) and oppositional defiant disorder (Ph1: 1; Ph2(a): 1; Ph2(b): 0; Ph3: 0).

Further information

Further information on specific and rare conditions may be found in the CLDD Research Project Briefing Pack on 'Rare chromosome disorders' on the Project website (http://complexld.ssatrust.org.uk), and on the Contact a Family (www.cafamily.org.uk) and Unique (www.rarechromo.org) websites.

Recommendation

Children with Complex Learning Difficulties and Disabilities are presenting profiles of learning need not previously experienced by schools. We recommend that headteachers and SENCOs access the free CLDD Briefing Packs, available through the Specialist Schools and Academies Trust, and disseminate widely across all of their staff team.

INTRODUCTION TO DATA ANALYSIS

The data collected about students in all three phases of the CLDD research project (except where specific phases are indicated) included:

- Information about students' conditions from literature (Phase 1)
- Baseline data – Information on student conditions and teaching/learning/social and emotional issues (documentary evidence/stakeholder interviews)
- Engagement Profiles (descriptive) and Scales (scores and descriptors) – baseline (pre-intervention) and intervention data (see Appendix 6 for Engagement Profile and Scale document)
- Evidence of key questions asked which led to the resolution of learning issues for students during the intervention
- Reports from CLDD project advisor group visits to schools (Phase 1)
- Interviews with key stakeholders, including families and non-teaching professionals (Phase 1)
- Perceptions from exit interviews with educators (see Appendix 4 for schedule)
- Periodic written and verbal feedback (additional to exit interviews) on CLDD Engagement for Learning resources from CLDD project schools and stakeholders: Engagement Profile and Scale and CLDD Briefing Packs (Phase 1); Inquiry Framework for Learning (all phases)
- Evidence of meetings / conversations / reflections in research journals / records of contact (research assistants and schools)
- Participant and non-participant observation (supported by video when possible) (schools and research assistants)
- Student voice evidence – around permission to be included and preferred learning approaches.

Data analysis

Literature overview

The reading of relevant literature, presented as a literature overview prefacing this report, provided context and direction for the CLDD research project, and also formed the basis of a series of six Complex Needs booklets providing an overview of issues associated with the education of students with CLDD, and ten CLDD briefing packs (see http://complexld.ssatrust.org.uk).

Baseline data

– Phase 1: Development of resources in liaison with 12 'development schools'

The schools submitted an initial Student information form (see Appendix 2). As the CLDD project research assistants needed to work alongside students and school-based practitioner researchers in implementing and developing the CLDD Engagement for Learning resources, in-depth information was collected about the student from both documentary sources (i.e. students' personal files held by the school), non-participant observation, and from semi-structured interviews with educators, families/carers and non-teaching professionals involved with the student. Prior to implementing interventions to support student engagement, schools were also asked to complete, for each student, an Engagement Profile and to collect pre-intervention baseline Engagement Scale data to provide a point of comparison with data collected post-intervention.

The purpose of this was to provide contextualising information for:

- Research assistants – as a basis for developing appropriate personalised interventions for students in liaison with the school's lead practitioner researcher and others
- Overviews of student participant group complex conditions – analysed using simple count frequency
- Individual student case studies which summarised the context, intervention, purpose, numeric and descriptive data, and engagement outcomes.

– Phase 2: trialling of resources by 49 UK and 15 international 'SEN trial schools'
– Phase 3: trialling of resources by 12 UK mainstream schools, and two UK early years settings
As for above, the schools submitted an initial Student information form only, and no further documentary evidence was sought as in Phases 2 and 3, the research assistants acted in an advisory capacity only, and did not work directly with students.

Engagement data – Phases 1, 2 and 3
Engagement Profile and Scale data collected as a result of interventions with students involved in all three phases of the CLDD research project yielded both numeric data in the form of Engagement scores and the associated descriptive data which recorded context, strategies, issues, outcomes and next actions. Numeric score data were plotted against date to give line graphs of the student's 'engagement journey' over the intervention period. Relevant descriptive data (e.g. intervention aim, context, strategies, etc.) were also noted.

This data was included in individual student case studies, described above, and also contributed to a count frequency overview of Engagement outcomes ('positive', 'no change', 'negative', 'compromised/no data') for the students involved at each phase.

Exit interviews
Where possible, exit interview schedules (see Appendix 4) were shared with interviewees before the interviews took place. The interviews were conducted by a research assistant / officer / consultant with either (a) the lead practitioner researcher who provided representative responses on behalf of educators participating within their school, or (b) the educators involved as a group, or (c) a series of individual educators. Most interviews for the UK trial schools took place face-to-face, and most interviews for international trial schools were conducted over the telephone. In cases where it was not possible to arrange in-person interviews, interviewees were asked to compete the interview schedule in text.

Responses from each school were collated as a single data set. Where more than one educator interviewee from the same school made equatable statements, they were counted as a single statement. The collective term, 'school', is used in association with the data outcomes from a single school. These interviews were analysed using categorical content analysis.

Other data collected
The other data collected was used for varying purposes:

- Video and research journals/contact records were used to corroborate evidence collected by other means
- Feedback from stakeholders about specific CLDD Engagement for Learning resources were used to adapt, extend and modify the resources throughout the project
- Data around student opinion and permissions for inclusion within the project was used to inform interventions.

Data from these sources has not been further analysed.

Presentation of data

The results are presented in four sections:

1. Data related to special school general outcomes
2. Data related to special school outcomes related to the CLDD Engagement for Learning Resources
3. Mainstream schools / early years settings trial data
4. Messages from data relating to key education themes
    i. Mental health issues
    ii. Training the SEN workforce
    iii. The role of teaching assistants
    iv. Towards transdisciplinary working
    v. Preparing for adulthood
    vi. The family perspective.

Data relating to special school general outcomes

Phase 1: 12 SEN development schools
Phase 2(a): 50 UK SEN trial schools
Phase 2(b): 15 international SEN trial schools

At the end of each research phase, exit interviews were conducted in each school with the lead practitioner researcher, who either represented their own views and those of the others involved in the CLDD research project from their school, or involved other staff in the interviews with them. The interview responses from each school were then analysed using categorical content analysis. Answers to all questions were grouped by common emergent themes and the presentation of results reflects this. In each case, educators' comments about the impact of the engagement approach can be categorised into comments relating to the students, educators' practice and whole school.

The analysis in this section represents general statements which were not specific to one of the CLDD Engagement for Learning resources. Statements made by schools specifically about the resources are presented in the section following.

Bracketed numbers which follow data statements indicate the number of schools sharing a particular view. The word, 'school', used in association with a data outcome, refers to the professionals involved in the project within the school unless stated otherwise (e.g. 'the whole school'). Although the numbers of schools involved in most phases were small, percentages outcomes are given where helpful for comparison across phases. Unless specifically stated otherwise, the percentages given are in the context of the whole participant school group.

The data in this section is summarised in the discussion at the end of this report.

OUTCOMES FOR STUDENTS AND EDUCATORS

Phase 1: Development schools

Engagement outcomes for students

Engagement data collected using the Engagement Profile and Scale were analysed for 60 students in 12 schools. Across the period of the development phase, 45 (82%; n=55) students had shown an increase in engagement following intervention; one (2%; n=55) showed no change; nine (16%; n=55) students showed a decrease in engagement. For five students data was compromised.

Engagement as an ethos/approach and in practice

All 12 (100%) schools involved in the Phase 1 (development of resources) were positive about the CLDD engagement for learning approach for developing learning pathways for students with CLDD. During their exit interviews, some described it as 'an ideal starting point' (1), 'a different and refreshing way of focused learning' (1), and 'the missing link between the target and adapted teaching' (1). One school said that the approach endorsed their current practice.

Seven schools also talked about the positive outcomes of the CLDD research project for the whole school. Three commented on its impact, saying that they had benefited (1), and the impact had been 'huge' (1) or 'powerful' (1). All seven spoke about the effect on the practice of staff involved, describing it as informative/enriching (5), improving skills (2) and increasing confidence (2).

Impact for students of implementing the CLDD Engagement for Learning resources

The development schools were not asked about the impact of using the CLDD Engagement for Learning resources with students, as happened in exit interviews for subsequent phases. The resources had changed and developed considerably over the period of implementation, and the lead practitioner researchers had worked closely with research assistants so student outcomes were therefore already known. These have been written up within case studies. (See Appendix 5 for an example.)

However, nine of 12 schools made comments on the positive impact of using the CLDD Engagement for Learning resources with their students. Six spoke generally of this impact, one mentioning it had been huge. Variously, the six schools commented that using the resources had given them a greater insight into their students' changing needs/abilities (3), increased the quality of what they delivered (1), and enabled them to move students on (1).

Impact for staff of implementing the CLDD Engagement for Learning resources

Four of 12 schools commented on the place of engagement in their teaching. One school said that the CLDD research project had given them more awareness of what they were looking for in student engagement, and of the importance of thinking on a small scale about how to re-engage students (1). The two other schools advised that 'You have to really try to think of all things you can use to engage students,' (1) and concluded, 'Engagement tells us we have to go beyond provision' (1).

Reframing practice

Comments made by eight (67%) schools in the context of the CLDD Engagement for Learning approach suggested that the tools were helping them to reframe their teaching in the following areas:

- Awareness of the student as learner (6; 50%)
- Thinking and reflection (5; 42%)
- Professional focus (4; 33%).

Awareness of the student as learner (6; 50%)

Comments from six schools came into this category. Among their responses, they felt that the CLDD Engagement for Learning approach had given them the opportunity to look at the student first rather than the curriculum first (1), and a greater insight into their students' changing needs (1). Before the project, one school had not realised that one of their students could be responsive. Other schools said that they now knew what they needed to change for students (1), and they felt that through the project, the education offered to their students had improved (1).

Thinking (5; 42%)

Three schools stated their involvement with the CLDD project had caused them to open their mind to/become converted to/discover engagement – one school described it as 'almost a lightbulb moment!'. Two schools said that it made them think from the students' perspective (1) and about the barriers preventing them in getting involved in learning (1).

Professional focus (4; 33%)

Four schools noted a change in their professional focus. They said variously that the CLDD Engagement for Learning approach had helped them focus on the student (1), on the students' strengths and positives (2), and on where the student was in their learning journey rather than where people thought they should be (1).

Areas of practice

In their exit interviews, ten (83%) of the Phase 1 development schools commented on the ability of the CLDD Engagement for Learning resources to support key areas of practice:

- Personalising learning (8; 67%)
- Observing (6; 50%).

The comments on planning, target-setting and assessment all related specifically to the resources, so while positive, are discussed further in the resource feedback section of this report (p. 59 ff.).

Personalisation (8; 67%)

Five schools spoke about personalisation in the context of the developing the CLDD Engagement for Learning resources. They felt that the engagement approach fitted well (5) or was the key (1) to personalisation. Two schools spoke of its impact on students, one saying that it supported individualised and imaginative curriculum approaches for students with CLDD; the other commented:

The children…can make massive progress when learning is personalised.

Observing (6; 50%)

Six schools commented about observations in the context of the research. Among them, three specifically stressed its importance, and one referred to the need to discover whether the student was engaged, and what they were learning.

Phase 2(a): UK SEN trial schools

Engagement outcomes for students

Data for 91 students in 50 schools collected using the Engagement Profile and Scale were analysed. Across the period of the SEN trial phase, 74 (85%; n=87) students had shown an increase in engagement following intervention; 8 (9%; n=87) had shown neither increase or decrease; and 5 (6%; n=87) of schools had shown a decrease in engagement. Two schools submitted corrupted data, and nine schools submitted data for only one student. (see 'Discussion', p. 163.)

Engagement as an ethos/approach and in practice

During their exit interviews, 50 schools were asked their opinion of engagement as the guiding concept to develop personalised learning pathways for students. The interviewees from 48 schools (96%) responded positively, while two schools were ambivalent. Two of those who responded positively, while liking the approach, had struggled with delivery due to time/human resource issues. Thirty-seven schools (74%) expressed a value opinion when asked what they felt about engagement as an approach for developing personalised learning pathways for students. They variously described it as:

- 'Effective' / 'worked well' / 'very useful' / or similar (16; 32%)
- 'Really valid' / 'fundamental' / 'essential' / or similar (12; 24%)
- 'brilliant'/'excellent'/'outstanding/or similar (9; 18%).

One educator summarised, 'It helps us, our practice, and how we are supporting children', and another stated, 'This is a real response to the challenges of 21st century schools.'

In addition to the value statements made about the engagement approach as a concept, 25 (50%) schools went on to make further comments about the engagement ethos/approach, not including specific evaluations of individual CLDD Engagement for Learning resources. These covered defining/explanatory features of engagement (9), the relationship between engagement and students' learning (14) and the impact of engagement on educators' work with students (11). Eight schools talked about general engagement outcomes – seven positively, and one with negative connotations (while also identifying a positive outcome for the school).

Defining/explanatory features (9; 18%)

Schools variously described the engagement approach as 'a whole new way of teaching' (1) and a mindset (2) which made them look at learning differently (1). Quoting Carpenter (2010) one

described it as a 'bridge between the learner and the target'. They identified the concept as being made up of many elements (1), and said that the seven indicators helped them to understand engagement (1). They saw two of the engagement indicators, curiosity and investigation, as prerequisites for learning (1), and stated that students' engagement was affected by a wide variety of factors (1). One school suggested that student engagement should be the core concept of curriculum delivery and everything else should be fitted around it.

Relationship between engagement and students' learning (14; 28%)

Nine schools identified engagement as a prerequisite of students' learning. Three schools stated that one can engage with every child (1), and that the approach had given help with the most challenging (2). Four schools commented that engagement offered a 'way in' to teaching students with CLDD.

Impact of engagement on educators' work with students (11; 22%)

Individual schools stated that to use the engagement approach, educators needed to know the student (1). Through the CLDD research project, they had developed their awareness of the importance of engagement (1), begun to see how to engage students (1), and have a greater idea of what they were looking for in student engagement (2). They stated they had begun to focus on student engagement instead of behaviour (1) or how much students remembered (1). They had also become more aware of the factors affecting student engagement (e.g. noise) (1).

Schools said that they had learned more about their students using the engagement approach (1), and that until they were forced to focus on a student's engagement, they might not have noticed that the student was not engaged (1). They emphasised the importance of looking for small signs of engagement (1), and of the need to step outside comfortable strategies to engage students.

General engagement outcomes (8; 16%)

The following general comments were made in addition to specific outcomes which schools mentioned in relation to individual students (described below). The seven schools identifying positive outcomes made individual comments that engagement had been key for a long time, but that they had not previously had the framework provided by the CLDD Engagement for Learning resources (1). This school said that the Engagement approach would now be key to their future whole school practice. Schools had observed the impact of using the approach on student engagement (1), and had found that it reduced disturbance in the classroom (1). As mentioned above, it had given help with the most challenging students (2), and had provided a 'way in' to student learning (4). One educator commented: 'the impact on students has really affected me'.

The school which had called the CLDD Engagement approach 'an ideal world solution', also commented that the approach had developed their awareness of the importance of engagement.

How the engagement approach impacted on student learning

Forty-three (86%) of the 50 schools commented on the positive impact of the CLDD engagement for learning approach for their students. Nine described the impact as huge / massive / transforming or similar. Others stated that the approach 'had really worked for the student' (2), was a more positive way for students to progress (1), and had revealed wider student interests (1).

Among those 43 schools, 40 (80%) described one or more positive learning outcomes for their students, and 29 (58%) described positive emotional/social outcomes for their students. Twenty-four (48%) stated both learning and emotional/social outcomes.

Of the remaining seven schools (14%) who did not describe positive outcomes for students, one said that there had been a positive outcome for one student only; one said that using the tools had neither helped nor hindered; and a further three said that there had not been much progress. Three educators did not make a related comment.

Positive learning outcomes

Schools stating specific positive learning outcomes, as opposed to making a general positive statement, described progress for their students in a range of areas including:

- Engagement (28)
- Active/focused learning (15)
- Communication (13)
- Skills (9)
- Independence as a learner (7)
- Improved attitude to learning (6)
- Progression (3)
- Extending learning (2).

Positive social/emotional outcomes for students

Schools' association of social/emotional outcomes for students with CLDD Engagement for Learning interventions was unexpected, but 29 (58%) schools mentioned a range of outcomes in this area for their students. These included:

- Social relationships (14) – including better relationships with staff, peers, and family.
- Wellbeing and happiness (9) – including better mental health (1)
- Confidence / self-esteem / empowerment (8) – including bringing out personality (3) and increased student expectations of themselves (1)
- Improved behaviour (10)
- Increased alertness (4) – three schools mentioned success in engaging passive learners.

One educator asserted: 'When he is happy, and everything is right holistically, then you get the "wow" moments.'

Nine schools commented that they had been able to generalise successful strategies used to develop a student's personalised learning pathways in one area to other, less successful, areas.

How the engagement approach changed practice for schools and educators

Impact on the whole school

Four schools mentioned the impact that the CLDD Engagement for Learning approach had had on the whole school. They described it as 'massive' (1), and said that it had 'given us the "oomph" factor' (1). One stated, 'It has turned our thinking around', and another that 'Engagement will be key in our future practice.' One school stated that the project findings had helped provide evidence which led to a change in school approach to teaching their particular population of students.

Reframing professional practice

Forty-two (84%) schools referred to the relevance of the engagement approach to areas of professional practice. Their comments have been categorised into specific areas including:

- Thinking, reflection and analysis around practice (29; 58%)
- Awareness of student as learner (28; 56%)
- Professional focus (15; 30%)
- Understanding (9; 18%)

Thinking, reflection and analysis around practice (29; 58%)

Of the 29 schools which made statements about thinking, reflection and analysis, comments from 14 schools were subcategorised under 'Challenging professional perspective'. These schools spoke of a change in perspective (5), which had been fundamental (1), turned their thinking around (1) and had allowed them to look at learning differently (2). One school said that the engagement approach encouraged 'thinking outside the box'. Seven schools said that the CLDD Engagement for Learning approach had made them think more/more deeply or broadly (6), extended their thinking (1) and stimulated reflective thinking (1).

Statements from 15 schools were subcategorised under 'thinking about practice'. Among these, schools said that the CLDD Engagement approach made them think about what was going on in the lesson (3). They felt that using the CLDD Engagement for Learning resources had made them consider approaches and strategies for individuals (3) and their barriers to learning (1). They said that the approach had made them think about the young person as a learner (4), what they were getting out of lessons (5), how to engage them (2) and improve their learning (1). Schools said they had now accepted responsibility for students' engagement (1), and pitching lessons at an appropriate level for them (1).

Seventeen schools talked about the need for reflection on practice in the context of the Engagement for Learning approach (3), saying the Engagement approach had helped them reflect more (6) and supported their reflection (6) with beneficial outcomes (5).

One school described the Engagement Profile and Scale as 'a strong reflective tool for enhanced outcomes'.

Awareness of the student as learner (28; 56%)

Twenty-eight schools made comments which were categorised under 'Awareness of the student as a learner'.

Thirteen schools emphasised the place of student centredness in working with the Engagement for Learning resources. They stated they got to know students better over the period of intervention (7), and had continued to gain more information about them (1). Using the resources had made staff more aware of students' needs (3) and that students' needs must come first (1). It helped them to think from the student perspective. One educator said she had become more aware of what her student was trying to communicate to her.

Nine schools spoke about working with students. Over the intervention period, they had learnt more about how to work with students (e.g. persisting with a student) (3), had realised what improved their learning (2), and what they enjoyed about tasks (1). Staff were able to support students more effectively (1), and tried new things with them (2).

For 11 schools, working with the CLDD Engagement for Learning resources had heightened their perception of their students as learners. One school said that it helped them to realise that there is always room for improvement for students with CLDD. Schools said that the project reinforced that their students did have learning skills (2), and that their students took in more than they had thought (2). Their expectations and aspirations for their students had risen (4). They looked at the students as individual learners (3), and observed that although students presented the same, they may need different approaches (1). They stated that using the resources had helped them focus on what the students could actually do (1), and had provided evidence to prove one student needed a different educational approach (1). As one school commented: 'It has been good to see the kids improve.'

Ten schools spoke about the importance of using students' interests to motivate them in learning. Three schools noted that the approach engaged traditionally hard-to-reach students, including passive learners (3). One remarked, 'Until you are forced to focus on a child, you may not realise they're not engaged.' Individual schools also said that, through the project, they had learnt that you can engage with any child, and not to label children as difficult.

Professional focus (15; 30%)

Fifteen schools spoke of the value of the focus given by the CLDD Engagement for Learning approach. One commented: 'It shows the information is there – focus is what's needed.' Schools said that it had helped them focus on the student as a learner (6), on strengths and opportunities (2), and on students' interests and motivators. This took away the focus on behaviour (1) and memory (1). Four schools commented that the CLDD resources had kept them focused.

Understanding (9; 18%)

Schools described increased understanding of how students learn (3) and what engages them (1). They realised when expectations (e.g. length of attention) or activities were inappropriate (2), and had a greater understanding of students' barriers to learning (5) and what facilitated learning (e.g. time to explore) (1). Staff also better understood how to put strategies in place.

Areas of practice

Using the approach also highlighted for educators the importance of familiar practice tenets. Forty schools (80%) commented on the three areas of practice below:

- Planning, target setting and assessment (25; 50%)
- Personalising learning (17; 34%)
- Observing (15; 30%).

Planning and target-setting (25; 50%)

Twenty-five schools made comments about the usefulness of the CLDD resources in planning, target-setting and assessment, and these are also discussed during analysis of specific resource evaluations which follows. Of these, seven schools commented on their impact. One school said that it had helped them look for the deeper purpose in individual lesson plans (1). Others stated they were better able to plan (2), the resources had helped them with setting targets (3), and that it had helped educators think about the 'next steps' for the students.

Personalising learning (17; 34%)

Personalisation of learning occurs when a student needs more than differentiation to learn.[81] Seventeen schools commented on the CLDD Engagement for Learning approach in the context of personalising learning. Five schools described it as the key to personalising learning; with a further school emphasising the importance of personalisation (1) and looking at the student as an individual (1), commenting that they had to see *how* a student learns to personalise. They stated that the Engagement for Learning resources fitted in with personalising learning (4), and helped them to provide programmes which were more personalised (1). Six schools identified personalising learning as an area in which the CLDD Engagement for Learning resources had supported or refined their practice (6), including helping them to think more clearly about personalisation (1).

Observing (15; 30%)

Schools made specific comments about the usefulness of the CLDD resources in observations, and these are discussed during analysis of specific resource evaluations which follows. Fifteen schools talked generally about observing in the context of the CLDD research project. Schools emphasised the importance of formally observing students (3), and noted the benefits as a detailed focus (5) which opened their eyes to more (1). They spoke about the purpose of observation (5) as seeing what is *actually* going on in the classroom (4), and learning how students learn (1). They added that observing as a non-participant led to better quality observations (2).

Incidentally, a popular way of observing was through the use of video, with 18 educators (37%) recommending its use. Ten educators (20%) noted that they noticed more/picked up on things they missed. One explained: 'it made us stop and look.'

[81] Porter, J. and Ashdown, R. (2002) *Pupils with Complex Needs: Promoting learning through visual methods and materials.* Tamworth: NASEN.

Phase 2(b): International SEN trial schools

Engagement outcomes for students

Data for 29 students in 15 schools were collected using the Engagement Profile and Scale and analysed. (One school submitted data for only one student.) Of the 29 students, there were three whose data was compromised. Across the period of the international SEN trial phase, 22 (84.5%; n=26) students showed an increase in engagement; one (4%; n=26) had shown neither increase nor decrease; and three students (11.5%; n=26) had shown a decrease in engagement.

Engagement as an ethos/approach and in practice

Of 15 schools involved in the international SEN trial, all (100%) were positive about the CLDD engagement for learning approach for developing learning pathways for students with CLDD – one school saying that it had turned their thinking around, and another that the idea of engagement had been very powerful for their students.

Fourteen schools commented on engagement, and ten (67%) schools expressed a value opinion on the approach, describing it as:

- 'Brilliant'/'excellent'/'outstanding/or similar (5)
- 'Really valid' / 'fundamental' / 'essential' / or similar (5)
- 'Effective' / 'worked well' / 'very useful' / or similar (3).

An additional two schools suggested others 'try it out' or 'embrace the concept'. Another stated that, since taking part in the CLDD research, 'We have taken engagement to underpin everything we do.'

What did engagement mean to educators?

Ten schools also commented about what they understood by engagement (six of the above and an additional four).

They stated that engagement was necessary for preparation for learning (2), and that 'curiosity', 'investigation' (two of the project's engagement indicators), and ability to focus were prerequisites to learning (1). One school stated that having an engagement focus was a new way of learning; however, two schools saw the CLDD engagement for learning resources as an enrichment of what they were already doing.

Schools said it was important to question whether students were *actually* engaged in a classroom activity (2), and look at what engages them (1). They found that using the engagement approach reduced disturbance in the classroom (1).

Five schools commented on the impact of using the CLDD Engagement approach for educators. They said that the approach had given information about how the student learned (1), and they saw how student engagement was affected by the way they taught (1). They now felt they could do something about areas of engagement which were missing for the student (1). They stated that it

was important to look at things which engage students at any level, not just the obvious (1), and also to keep trying, even when students did not look as if they were engaging (1). One school said that it had empowered them to deliver what their students needed (1).

Impact on students

All fifteen (100%) of the international trial schools described positive learning or social/emotional outcomes for the students involved in the CLDD Engagement for Learning resources trial. One school commented generally, saying that they improved the teaching and learning experience for the student.

Social/emotional outcomes for students

Five schools (33%) commented on social/emotional outcomes for students, noting improved social relationships (2), confidence (1), increased happiness (1) and decreased passivity (2).

Learning outcomes for students

Thirteen schools (87%) identified positive learning outcomes for students in the following areas:

- Improved participation (7) – including ownership of learning, co-operation, interest/attention
- Increased engagement (6)
- Improved communication (2)
- Increased skills (2)
- Improved behaviour (2).

Impact on schools and staff

Reframing teaching

Comments made by 12 (80%) schools suggested that the tools were helping them to reframe their teaching in the following areas:

- Awareness of student as learner (11; 73%).
- Thinking and reflection (9; 60%)
- Professional focus (6; 40%)
- Understanding (5; 33%).

Student as learner (11; 73%)

Five schools spoke about the student centredness of the CLDD Engagement for Learning approach, saying that they had got to know the student better/much better during the period of intervention (3), that they had gained an insight into the student's world (1), and staff had begun to look from the student's perspective (1). As a result, one school said that staff persevered more in engaging the learner.

Five schools spoke of an increased perception of the student with CLDD as a learner, saying that the approach had helped affirm student strengths, positive changes and abilities (3). It helped them to look at the student as an individual (1).

Four schools articulate the importance of motivating students. They spoke of being aware of (1) and building on personal motivators/interests (4), and then gradually increasing the learning challenge (1).

Thinking and reflection (9; 60%)

Of the nine schools which said the CLDD Engagement for Learning approach had stimulated thinking, three said it had changed their perspective or way of thinking, and one that it had helped them to think more. Four described ways in which it had made them think more clearly – around engagement (2), the purpose and function of learning (1), what is going on in the lesson (1), and adapting strategies/activities for individual students (1). Four spoke about the importance of questioning – two that it had helped them to inquire more/more clearly. Another observed that it was necessary to 'probe deeply to promote further learning'.

Five mentioned the importance of professional reflection in association with the tools – two stating its importance, and two that it had stimulated deeper/more careful reflection on practice. The fifth talked of a positive reflective outcome.

Professional focus (6; 40%)

Six schools said that taking part in the research had changed or helped their teaching focus. Of those who commented specifically, three felt they were more focused on student positives, strengths and successes; and one on the student as a learner.

Understanding (5; 33%)

Five schools noted that their understanding of how students learned had deepened. They had begun to realise what engaged students (1), and also what was inappropriate for them (1).

Areas of practice

All 15 (100%) international SEN trial schools talked about ways in which the CLDD Engagement for Learning resources had helped to refine their practice around:

- Observation (8; 53%) – highlighting the importance of detail for interventions; finding out whether students were really engaged (1), what engaged them (1) and how they learned best (2)
- Personalisation (7; 46%) – including comments that the CLDD resources supported personalisation (4), and allowed programmes to be fitted to the student rather than vice versa (1)
- Planning, targets and assessment (6; 40%) – changed the way goals were set (1); helped clarify thinking around target-setting (1); allowed even minimal progress to be charted (1);
- Consistency (1; 7%) – emphasised its importance (1).

Findings from mainstream / early years settings are presented in a separate section (see p. 103)

IMPLEMENTING THE CLDD ENGAGEMENT FOR LEARNING RESOURCE FRAMEWORK

Phase 1: Development schools

All the 12 (100%) development schools said that they would continue to use the CLDD Engagement for Learning resources in some way after the end of the project. Seven schools (58%) said that educators involved in the CLDD research project would continue to use the resources as trialled, and eight (67%) schools stated that they would roll the resources out across the school.

Of the eight schools rolling out the resources, three schools said that they would roll the resources out partially. Three of these schools, and an additional fourth, had given their practitioner researcher responsibility for leading on engagement / complex needs in school. Two schools, including one who had not stated an intention to roll out the resources, were intending to train their own staff (1) and another school (1) in the approach. In six schools, the educators involved in developing the CLDD Engagement for Learning resources, intended to continue to use them – three with project students, and five with additional students. One school said they intended to use the resources partially.

Issues around implementing the CLDD Engagement for Learning resources

Only one development school mentioned that time had been an issue in implementing the CLDD Engagement for Learning approach, and that it needed to be allocated to it.

Advice for future schools implementing the resources

Among more specific advice offered by schools for anyone implementing the approach, four schools commented on the need for support from both management and colleagues. They emphasised that it was crucial to have someone in a supporting role (1), that all staff needed to be 'on board' and see it as an opportunity (1), and having an outside observer had a big impact (1). One school mentioned the importance of communicating and sharing within a team, adding that this was a 'big thing'. Another stressed the importance of sharing student observations within a team, and seeking advice from others.

Phase 2(a): UK SEN trial schools

Forty-six (92%) of 50 SEN trial schools said that they would continue to use the CLDD Engagement for Learning Resource Framework in some way after the end of the project.

Eighteen (36%) schools have rolled out the CLDD Engagement for Learning resources across the school. In three schools, the practitioner researcher for the CLDD research project had been asked to take the school lead on the Engagement for Learning resources.

In 27 (54%) schools, the educators involved in the CLDD research project said that they would continue to use the Engagement for Learning resources; 14 mentioned that this would also be with new students. Sixteen schools (eight additional to the 27 above) said that there was a place to share the CLDD Engagement for Learning resources more widely across the school. One school said they

would share them with their residential care department. Two of the 27 schools, alongside two others, stated that they would use the approach alongside other approaches (e.g. PEPs/IEPs). One of the 27 schools, again with two others, suggested that they would use the resources, but might adapt them to their setting.

There were four schools which, at exit interview, did not indicate that they would continue to use the resources. Two were ambivalent about the resources, but two had found them useful. The four schools variously stated:

- Liked the resources, and thought there was a place for them to be used more widely across the school; noted that there was a training implication, but stated that taking part in the research had been a form of continuing professional development (1)
- Found the resources useful (1)
- Although 'really useful', they are 'ideal world' resources (1)
- Not sure if they would use it, although could see some advantages (1).

Three schools identified barriers to implementation of the CLDD Engagement for Learning approach in their schools. They mentioned time (1), funding (1) and support (1). One of these was the school who saw the resources as being use in an 'ideal world'. Of the remaining two, one said that more support and allocated time were necessary, and that currently the resources would not be used regularly (1). The other thought that there was a place for sharing the resources more widely in her school, but that training in the approach was needed.

There was one other school who did not intend to use the resources regularly. The practitioner researcher said that she would like to keep looking at engagement, and the resources would continue to influence her practice.

Issues around implementing the CLDD Engagement for Learning resources

A total of 32 (64%) schools identified issues around implementation of the CLDD Engagement for Learning framework. Twenty-seven (54%) schools said that implementing it was time-consuming – although nine added that it was worth the effort/worthwhile. Six of the 27 schools, plus an additional two, said that it was demanding in terms of human resources, and six schools noted there was a lot of/too much paperwork.

However, despite this, 22 (71%) of the 32 schools stated either that they would roll out the resources across school (13), or that the educators who had been involved with the CLDD research project would continue to use the resources (9).

Advice for future schools implementing the resources

During the exit interview, schools were asked to offer advice to future schools which may be involved in implementing the CLDD Engagement for Learning Resource Framework. Schools urged other schools to try the approach (17; 35%), advising them to 'go for it'/'be open minded' (7) and persevere (4). They stated it was worthwhile (11), gets easier (2) and 'the results are amazing' (1).

Among very specific advice, the main area of comment, as with the developing schools, concerned senior leadership and peer support. Outcomes are summarised below:

Fifteen (30%) schools identified the need for organisational support for implementing the framework. They stated that it needed leadership/coordination (10) from someone dynamic and enthusiastic (1) who understood the project (1). This leader should possibly be at senior leadership level (5), and the implementation given acknowledged priority (2). They suggested that all staff needed to know about the framework/see it as an opportunity (6), although they noted that tact would be necessary when addressing practice issues with some staff (1). They recognised the helpfulness of having a mentor/guide for those involved in implementing the framework (3).

Twenty-five (50%) schools (including six of the 14 above) emphasised the importance of sharing knowledge and ideas among colleagues when involved in implementing the framework. They suggested that those involved should be able to collaborate and share together (9), and meet as a team (1 + an additional 5). Four suggested that discussion/challenge among colleagues was valuable, and one pointed out the dangers of not having this check on practice if an educator was working in isolation. Another said that discussion among the class team was necessary to ensure consistency in the use of the framework.

Phase 2(b): International SEN trial schools

Of the 15 schools in the international SEN trial group, all 15 (100%) said that they would continue to use the CLDD Engagement for Learning resources in some way. In nine (60%) schools, the educators involved intended to continue to use the resources as trialled, and five (33%) schools intended to roll out the CLDD Engagement for Learning Resource Framework across the school.

Of the five schools intending to roll out the resources across the school, one said that this would be in part. Nine schools said the educators who had been involved in the project would continue to use the resources. Three of these, and one additional school were planning to use the resources with other students. Four schools (three of the nine, plus one additional school) thought there was a place for the CLDD resource framework to be used more widely in their school, and another said that other staff were interested in using it. One school stated that they would use the approach in association with others, and another that they would use aspects of the resources. Four schools intended to keep the CLDD Engagement for Learning Resource Framework in mind; one of these identified that they would need more support and more time if they were to continue using the resources.

Issues around implementing the CLDD Engagement for Learning resources

Eight schools mentioned issues associated with implementing the resources. Seven stated that time allocation was needed to implement the CLDD Engagement for Learning approach, and two said they had struggled with making time. Three schools mentioned the need for additional colleague support, saying that the approach had required extra work and personal input.

However, notwithstanding, six of the eight schools intended to implement the approach – one of the schools which were rolling out the resources, and five schools in which the educators involved were continuing to use the resources.

Advice for future schools implementing the resources

As with the UK schools, the two major areas raised by international schools (9) for any others wishing to implement the CLDD Engagement for Learning resources in the future were management support (6) and team working/sharing (6).

Six schools stated that implementation of the framework needed managing, three suggesting this should be at senior leadership level. One said that it was important to ensure high level commitment from staff involved as implementation involved additional work. Two schools said that they had appreciated the external implementation mentoring support, and said it would be good if it could continue.

Six schools talked of the value of team working – including communicating and sharing ideas (2), and ensuring consistency of implementation (2).

Data relating to special school resource trial outcomes

Phase 1: 12 SEN development schools
Phase 2(a): 50 UK SEN trial schools
Phase 2(b): 15 international SEN trial schools

At the end of each research phase, exit interviews were conducted in each school with the lead practitioner researcher, who either represented their own views and those of the others involved in the CLDD research project from their school, or involved other staff in the interviews with them. The interview responses from each school were then analysed using categorical content analysis. Answers to all questions were grouped by common emergent themes and the presentation of results reflects this. In each case, educators' comments about the impact of the engagement approach can be categorised into comments relating to the students, educators' practice and whole school.

The analysis in this section represents statements which were specific to one of the CLDD Engagement for Learning resources. Generic statements made by schools about implementing the Engagement for Learning Resource Framework are presented in the previous section.

Bracketed numbers which follow data statements indicate the number of schools sharing a particular view. The word, 'school', used in association with a data outcome, refers to the professionals involved in the project within the school unless stated otherwise (e.g. 'the whole school'). Although the numbers of schools involved in most phases were small, percentages outcomes are given where helpful for comparison across phases. Unless specifically stated otherwise, the percentages given are in the context of the whole participant school group.

The data in this section is summarised in the discussion at the end of this report.

CLDD ENGAGEMENT FOR LEARNING RESOURCE FRAMEWORK

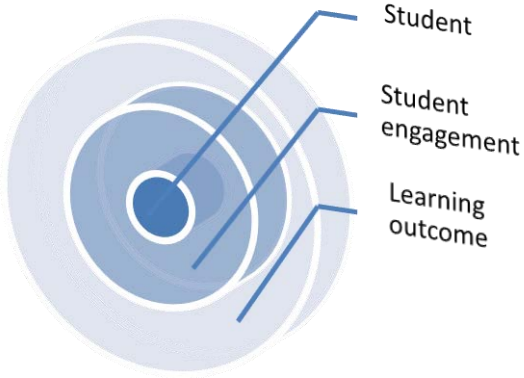
Students with CLDD are often disengaged from learning, and their learning needs go beyond the expectations for classroom differentiation, challenging the teaching skills of even our most experienced and effective educators.

The CLDD Engagement for Learning Resource Framework is a range of resources to support educators in developing personalised learning pathways for students. They comprise:

- CLDD Briefing Packs on conditions commonly occurring among students with complex learning difficulties and disabilities
- The Engagement Profile and Scale
- The Inquiry Framework for Learning.

Over the course of the project, they have been developed and revised in terms of content, style and design according to feedback from educators and stakeholders.

The three engagement for learning resources represent three facets of an engagement approach to teaching and learning, based on the premise that without engagement, there is no deep learning, effective teaching, meaningful outcome, real attainment or quality progress.[82] Engagement is the connection between the student and their learning outcome. Students with CLDD cannot create that connection for themselves; it is educators, families and colleagues who must construct it with and for them.



It is hoped that the engagement resources will support educators to develop high expectations of these young people as learners, to map personalised the learning pathways which will re-engage them, and to assess and track their engagement in learning.

The CLDD Briefing Packs identify the main learning needs and key teaching strategies associated with specific conditions which often co-exist in children with CLDD. These strategies may suggest the first steps towards personalising learning for children with CLDD.

[82] Carpenter, B. (2010) *A Vision for 21st-Century Special Education (Complex needs series).* London: SSAT.

The Engagement Profile and Scale enables educators to develop high expectations of children with CLDD around their engagement in learning through collecting evidence of the student's levels of engagement in activities of high interest for them. By reframing the learning activities in which the student has low engagement in line with the seven different indicators of engagement, educators can support the student to move towards deeper engagement in learning.

The Inquiry Framework for Learning indicates possible areas for further personalisation of students' learning, and supports an inquiry focused approach to engaging students with CLDD in learning. The questions within the framework identify the starting points from which educators, in association with the student's family and colleagues from their own and other professions, can explore focused learning issues for individual students.

Complex needs booklet series

The use of the CLDD Engagement for Learning Resource Framework needs to be set within the wider theoretical and practical context of CLDD. The SSAT's series of six Complex Needs booklets, written by Professor Barry Carpenter and others in the CLDD research team and published in association with the SSAT's Special Schools Network, provide an introduction to the area and its concerns. The six titles, each focusing on a different aspect of provision for children with complex needs, are:

- A vision for 21st century special education
- Children with complex learning difficulties and disabilities: who are they and how do we reach them
- Curriculum reconciliation and children with complex learning difficulties and disabilities
- Mental health and emotional wellbeing
- Professional learning and building a wider workforce
- The family context, community and society.

Drawing upon the 'think pieces' written for the SSAT's CLDD blog spots, they identify signposts for inquiry-based development which will support schools into the 21st century. Colleagues from schools involved in the CLDD research project contributed their professional perspectives to the booklets through blogs and think pieces.

RECOMMENDATION 2

Schools involved in this CLDD research project have demonstrated great commitment, insight and endeavour. The wider community of schools will now need to be informed. Systematic, critical reflection in schools will enable this. We recommend that the Specialist Schools and Academies Trust's Complex Needs booklets are used to aid and stimulate debate and discussion.

CLDD BRIEFING PACKS

What are the CLDD Briefing Packs?
There are ten CLDD Briefing Packs each of which provide initial information about conditions which often overlap with others to form the complex make up of children with CLDD.

The packs cover the areas of: Attachment disorders, Attention deficit hyperactivity disorder (ADHD), Autism and autistic spectrum disorders (ASD), Fetal alcohol spectrum disorder, Fragile-X syndrome, Mental health, Prematurity, Rare chromosome disorders, Sensory impairments, and The effects of drug use and smoking in pregnancy.

Each pack includes three different sheets:

(a) ***Briefing sheet***: This provides initial information about the conditions for educators and others who want a brief introduction. It provides background information, key strategies and references to some key texts about the condition.

(b) ***Classroom support sheet***: This provides 'must have' basic information about the condition for staff newly arrived in the classroom and needing to work immediately with a young person who has that condition.

(c) ***Information sheet*****:** For those who would like to follow up the topic in greater depth, this sheet provides more information with further references.

There is also a glossary to explain any terms or concepts not explained in the sheets.

The Briefing Packs and students with CLDD
Due to the nature of students with CLDD having more than one diagnosis, one pack alone may not provide adequate information about supporting a student. Therefore the briefing sheets should be a starting point for practitioners working with a student, until a personalised learning pathway can be established with details of effective strategies relevant to that student. It is important to be aware of the uniqueness of each child and young person, particularly those with CLDD.

Sharing the information from the CLDD Briefing Packs between practitioners and families will enable a greater insight into the challenges experiences by both the student and those involved in their learning.

Implementing the packs
It is important that the packs are used within an ethos which promotes transdisciplinary and multidisciplinary collaboration, including active involvement of families and the student themselves to the extent they choose or are able to be.

- Professionals need to work collaboratively across disciplines when planning and assessing personalised learning pathways to ensure those who know the student best are sharing information, and to prevent fragmentation of interventions (see 'Transdisciplinary working', p. 146). This should also include families. Strategies and interventions will be most effective when they are understood and implemented consistently across school, home and other settings.

  It is important that the appropriate professionals are consulted about targets and interventions around positioning, sensory integration and arousal levels, health and medication.

- Consider how the student themselves can be involved. Can they provide information on their preferred learning styles or interests to shape a learning target or intervention? Can the student take a more active role in negotiating their own learning and managing their responses? This could be empowering for a student and take steps towards boosting school enjoyment and self-esteem.

How the packs were developed

The CLDD Briefing Packs were developed between January and August 2010, and during that time went through a number of revisions in response to comments received by the project development schools and other stakeholders.

The packs were compiled by the CLDD research project team under the guidance of Professor Barry Carpenter to the three-part format. They were developed in association with the project schools during Phases 1 and 2 of the project, and reviewed by project advisors. They were further commented upon by special school headteachers and other educators, the project steering board and other stakeholders in all project phases. They are available on line from http://complexld.ssatrust.org.uk.

Suggestions implemented (educator suggestions)

- Simplified language (especially for the classroom sheet)
- More open and appealing format / layout
- Professional design

Suggestions implemented (Advisor suggestions)

- To include a glossary (to be included on website)
- To include an introductory sheet

Suggestions not implemented due to lack of space/financial constraints

- Use of personalisable space (for the classroom sheet)
- Use of speech bubbles (for the classroom sheet)
- Use of pictures / photos / diagrams (for the classroom sheet)

Suggestions to be considered in the future

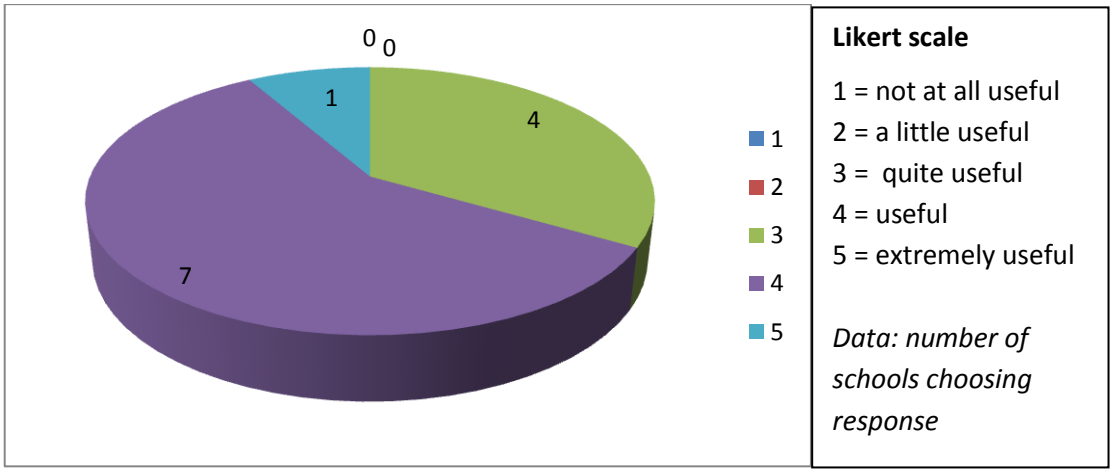
- Expansion of the conditions covered by the packs
- Provision of website links for conditions not covered by the packs.

The project implemented suggestions when possible. Rona Tutt, National Association of Head Teachers and author, advised on use of plain English. During September–December 2010, each of the packs was reviewed by one of the multidisciplinary project advisors who have specialisms across a wide range of fields.

What the CLDD research project's development and trial schools have said about the packs

Development schools

At exit interview (relating to January-August 2010, Phase 1 period), the 12 development schools were asked to rate the CLDD Briefing Packs using a Lickert scale between 1 (not at all useful) and 5 (extremely useful). The following pie chart shows how their responses were distributed.

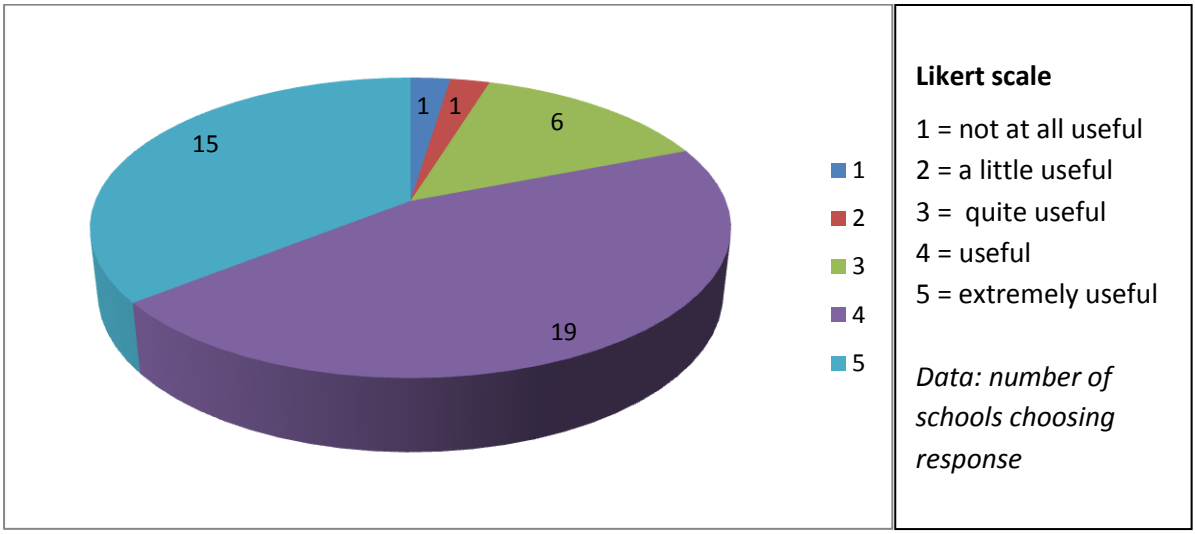


At Phase 1 of the project, 8 (67%) of the development schools rated the CLDD Briefing Packs as useful or very useful. None rated them as 'not at all useful' or as 'a little useful'. Four (33%) schools rated them as 'quite useful', seven (58%) as 'useful' and one as 'extremely useful' (10%). Four schools followed up their rating with positive comments only, and six

with a mixture of positive and negative comments. Four schools commented that the packs were too wordy.

UK SEN trial schools

At exit interview (relating to the September–December 2010, Phase 2 period), the 42 schools which had used the adapted CLDD Briefing Packs were asked to rate them.



In Phase 2, following improvements, 81% (n=42) of schools rated the CLDD Briefing Packs as useful or extremely useful. Only one school (2.5%) each stated that the Briefing Packs were not at all useful or only a little useful; six schools (14%) felt they were quite useful; 19 schools (45%) thought they were useful; and 15 schools (36%) said they were extremely useful.

Schools followed up with comments: 33 schools made all positive comments; four schools made positive and negative comments; and four made all negative comments. Nineteen schools commented positively on the content, most commonly that it was very readable/accessible, that the information was good and thorough, and that they liked the strategies and the references. One school commented:

> *It is useful for various disabilities – multisensory [impairment], VI etc... A good [overview of] current research for setting up classrooms and completing reports. It is a good professional basis, a good resource for school to have, a good professional development tool.*

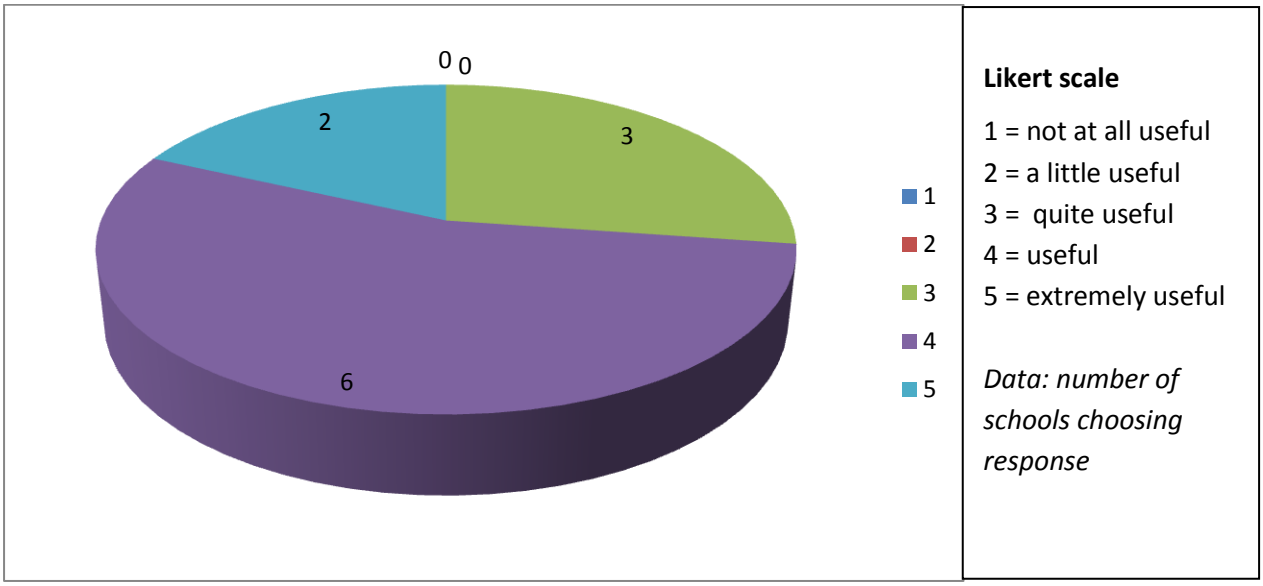
Three schools commented negatively saying they felt the sheets were too wordy or a lot to digest. Eleven schools commented positively on the structure, most saying that they liked the three different levels of sheets – briefing, classroom support and information. One school commented negatively that the sheets could be more user friendly.

Schools saw a range of applications for the sheets, including continuing professional development courses (5), refreshing staff memories (3) when new students arrived in class (2), and sharing information with:

- New staff / newly qualified teachers (10)
- Teaching assistants and support staff (6)
- Mainstream teachers (3)
- Colleagues from other disciplines (2)
- Families (2).

International trial schools

At exit interview, the 11 international schools which had used the CLDD Briefing Packs were asked to rate them as above.



Eight of the 11 schools (73%) rated the packs as either useful or extremely useful. No schools rated them as being not at all useful or a little useful. Three schools rated them as quite useful, six as useful and two as extremely useful.

All eleven schools commented following rating the briefing sheets, and all comments were positive; none were negative. Ten schools (90%) made positive comments on the content of the packs. Again, the readability/accessibility of the packs, the quality and thoroughness of the information, and the usefulness of the references were the most commented upon by four schools in each case. Two schools commented positively on structure – one on the three levels of the sheets and the other on the layout.

RECOMMENDATION 3

Children with Complex Learning Difficulties and Disabilities are presenting profiles of learning need not previously experienced by schools. We recommend that headteachers and SENCOs access the free CLDD Briefing Packs, available through the Specialist Schools and Academies Trust, and disseminate widely across all of their staff team.

ENGAGEMENT PROFILE AND SCALE

Principles underlying the resource

Engagement is the single best predictor of successful learning for children with learning disabilities.[83] Without engagement, there is no deep learning,[84] effective teaching, meaningful outcome, real attainment or quality progress.[85] It is the essential platform for sustainable learning to occur.

The concept of engagement in learning underpins the development of all the resources in the CLDD Engagement for Learning Resource Framework. Over the course of the project, the following statement and definition of engagement was developed in consultation with the project schools and Steering Board:

> *Sustainable learning can occur only when there is meaningful engagement. The process of engagement is a journey which connects a child and their environment (including people, ideas, materials and concepts) to enable learning and achievement.*

Ruble and Robson describe engagement as both a state and a trait[86] and relate it to a number of learning behaviours including: willing involvement; time spent on activity; attention; persistence; participation; and motivation to attain and master skills. In turn, motivation can be linked to:

- Student confidence in skills and learning
- Interest in and perceived relevance of tasks
- Personal enjoyment in activity.[87]

It has been noted that when students have a degree of control over their own learning, their levels of motivation and engagement increase.[88] [89]

The Engagement Profile and Scale is a classroom resource which enables educators to observe and document the engagement in learning of a student with CLDD towards a personalised learning target and their progress. It allows them to focus on the child's engagement as a learner and create personalised learning pathways. It prompts student-centred reflection on how to

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[83] Iovannone, R., Dunlap, G., Huber, H. and Kincaid, D. (2003) 'Effective educational practices for students with autism spectrum disorders', *Focus on Autism and other Developmental Disabilities,* 18, 150–166.

[84] Hargreaves, D.H. (2006) *A New Shape for Schooling?* London: SSAT.

[85] Carpenter, B. (2010) *A Vision for 21st-Century Special Education (Complex needs series).* London: SSAT.

[86] Ruble, L.A., and Robson, D.M. (2007) 'Individual and environmental determinants of engagement in autism', *Journal of Autism and Developmental Disorders*, 37(8), 1457–1468.

[87] Banyard, P., Underwood, J. and Twiner, A. (2006) 'Do enhanced communication technologies inhibit or facilitate self-regulated learning?', *European Journal of Education*, 41(3 & 4), 473–489.

[88] Cogill J. (2002) 'How is the interactive whiteboard being used in the primary school and how does this affect teachers and teaching?'. [Online at: www.virtuallearning.org.uk/whiteboards/IFS_Interactive_whiteboards_in the_primary_school.pdf; accessed: 17.5.09]

[89] Hennessy, S., Deaney, R., Ruthven, K. and Winterbottom, M. (2007) 'Pedagogical strategies for using the interactive whiteboard to foster learner participation in school science', *Learning, Media and Technology,* 32 (3), 283–301.

increase engagement leading to deep learning.

Engagement is multi-dimensional, and encompasses:

- Awareness
- Curiosity
- Investigation
- Discovery
- Anticipation
- Persistence, and
- Initiation.

These seven engagement indicators form the basis of the Engagement Profile and Scale.

The Engagement Profile and Scale (see Appendix 6)
As its name suggests, this resource consists of two interdependent parts – a profile and guidance which is used to record descriptions of how a student engages during a high-interest activity against each of the seven engagement indicators listed above; and a scale template which educators can use to record engagement scores and related descriptive observations against the same seven engagement indicators for an initially low-engagement activity.

By focusing on these seven indicators of engagement, educators can ask themselves questions such as: 'How can I change the learning activity to stimulate Robert's curiosity?' 'What can I change about this experience to encourage Nina to persist?' They enable educators to focus on achievable dimensions of engagement so that each area is considered and addressed for the student.

Over time, it is possible to record the success or otherwise of interventions, the adjustments made, and the effect this has had on the student's engagement score. The outcomes can be plotted as a graph with accompanying explanatory commentary, and successful interventions generalised to other settings. The Engagement Profile and Scale encourages student-centred reflection, supporting educators to develop learning experiences and activities around students' strengths and interests. It gives the student a 'voice' as a learner in terms of their interests, strengths and how they like to learn.

It is important to recognise the contribution that the student themselves can make to the profile and scale; families also will be able to offer unique insights into what can engage their son/daughter; colleagues from other professions who are working with the student can contribute valuable perspectives.

What is the engagement profile?
The engagement profile is a document which describes the way a student responds when engaged in an activity which is of great interest to them. Their responses are described in terms of the seven engagement indicators mentioned above. As many as possible of the

student's high engagement behaviours should be captured in the profile. The purpose of the profile is to describe how high engagement behaviours are shown by the student so that:

1. Other teaching staff can consciously recognise them
2. Educators realise that it is possible to engage the student at a high level, and therefore to develop high expectations of their engagement in learning.
3. Educators may discover what elements of the high engagement activity/activities engage the student so that the principles may be transferred in some form to the student's low engagement activities with the aim of increasing their engagement in those also.

It is most beneficial when a team (including educators – teachers and teaching assistants – other professionals and the student's family) discusses how a student shows their engagement in terms of each of the seven engagement indicators (see above). Once the team working with the student develops a shared and consistent perspective of how the student shows engagement, they can share observation and recording. It also encourages the enrichment of the students' learning experience through sharing ideas and strategies from different perspectives.

Case study example

The high engagement activity for one child with PMLD was watching and listening to pouring water. His low engagement activity was food technology – he would put himself to sleep at the beginning and wake up at the end of the lesson. His teacher wanted him to remain engaged and enjoy the lesson.

The class team carried out an engagement profile for one of his very few high interest activities, which was watching water being poured into a tin from a height. They noted his enjoyment of water, of watching the way the water poured and where it came from, and of the sound. They also noted how his behaviour showed that he was engaged – his body stilled; he paid close attention and tracked the water from its source to its destination; he vocalised.

The student's behaviour with the water pouring activity showed his class team how intently he could be engaged. They now knew how he responded if he was interested in an activity – and had an idea of what interested him.

One way (of several) in which they increased his engagement in food technology was to transfer some of the principles from his high engagement activity to the low engagement one. When making icing, instead of giving him icing to taste which previously he had rejected, the icing was first poured from a mixing bowl held high above a plate so he could

watch the way it poured (in the same way he had watched the water poured into a tin in the high engagement activity) and listen to the noise. He was entranced, and then became interested in the substance itself – what it felt and tasted like.

From this small adaptation, and others like it, his acceptance of, and engagement in food technology was increased until he remained awake and engaged for the whole lesson. He began to take part in other food technology activities which he had previously rejected.

The Engagement Scale

The Engagement Scale is used alongside the Engagement Profile. It incorporates the same seven engagement indicators mentioned above. However, whereas the Engagement Profile is carried out with a high interest activity, the Engagement Scale is used with a student's low interest activity.

To use the scale, the educator will need to select a low engagement activity for the student, and a specific desired learning outcome. This learning outcome may relate to a specific activity or a number of different ones. It is important that this learning outcome is specific and relevant, as otherwise use of the Engagement Scale cannot be focused.

Following a number of preliminary observations, scored using the scale to act as a baseline before making any changes to the activity, educators can begin to plan, record and make incremental changes to the activity which they think will increase the student's engagement.

It is important to make a minimum number of changes per session to the student's low interest activity. By changing one thing at a time, the student will not be confused or disorientated by too many changes, and if the student's engagement increases, the educator will be able to identify the associated modification which can then be transferred to other low engagement activities to increase engagement. For students with PMLD, it may take many sessions before educators know whether or not the student is responding to a change, and the pace of intervention will be correspondingly slow.

At each session, educators can score the student's engagement on a scale of 0–4 against each of the seven indicators; the score is made in comparison with the high engagement behaviours recorded on the student's Engagement Profile which represent a benchmark high score of four for that student; Engagement Scale scores are understood in this context.

Over the course of a number of sessions, educators will be able to record any change to the student's level of engagement in learning, the 'next actions' they plan to implement to

increase the student's engagement, which 'next actions' they have implemented, and the successful and unsuccessful strategies.

A key point

It is important to realise that the aim of using the Engagement Profile and Scale with a student is not to show ever increasing engagement. It may be that after introducing a new experience for the student in the context of the activity (e.g. generalising skills to another setting; introducing a social interaction aspect to an activity; introducing new elements to an existing task) that the student's scoring on the Engagement Scale falls. However it is important to continue to expand and extend the student's learning experiences as appropriate. The process of encouraging engagement will begin again in that new situation. The descriptive commentary provided in the Engagement Scale will allow explanation of these important and entirely justifiable variations in a student's engagement.

A student's engagement may also reduce for reasons external to the classroom (e.g. illness, following holidays, a situation outside school, changed medication), and this can also be noted on the scale.

Using the Engagement Profile and Scale is an intensive, personalised approach, and it is unlikely that educators would want to sustain it for one student with CLDD indefinitely. However, knowledge about how a student engages in learning over an intervention period can be transferred to other learning situations – in some cases with 'amazing' results.

Characteristics of the Engagement Profile and Scale

The Engagement Profile and Scale is a process-focused resource, guiding the development of personalising learning for students, rather than an outcome-driven resource. It is about creating paths to learning readiness for the student so that they can become an engaged learner. It is not age or ability specific.

The Engagement Profile and Scale is not purely task orientated. It can be used with any activity, task or pursuit where there is a need to support learning.

The Engagement Profile and Scale can be used alongside any curriculum. It is not a replacement for curriculum targets and assessment. However, it does show increments of progress which may otherwise go unnoticed and uncharted in the pursuit of curriculum targets. Although a student might not be fully engaged in an activity, progress can be shown in levels of engagement and the commentary. It increases the likelihood that the student and educators can experience successful learning outcomes.

The Engagement Profile and Scale looks at students with CLDD from a positive achievement perspective and guides those working with them to make incremental student-focused adjustments to a task to extend their engagement.

Development of the Engagement Profile and Scale

This resource was conceptualised by Professor Barry Carpenter based upon reading of relevant literature, and developed in consultation with Barry Coughlan, Clinical Psychologist at the University of Limerick and the CLDD Research Project team through focused debate during January–March 2010. It was further modified in consultation with the project's development schools (March–July 2010), and trial schools (September–December 2010).

Suggestions implemented (educator suggestions)

- Include box on the first page of the scale for observations about the student's mood, etc.
- Simplify the instructions for how to use the resource
- Change the definitions of the indicators from dictionary definitions to more user friendly definitions
- Include a second column for the engagement scale for educators to record 'Next actions'
- Include worked examples.
- Move the list of scale scores to page 2 of the Scale to make it easier to refer to.
- Substitute descriptive words for numbers on the engagement scale on page 1.

Suggestions implemented (from researcher observations)

- Convert the list of seven indicators into something less hierarchical.
- Provide a mainstream version: minor changes to make terminology more relevant.
- On page 1 of the scale to separate the space for student targets / strategies used, due to educator confusion.
- Include a second box on page 1 of the engagement scale so that educators could write in the 'Next action' they are taking forward from the previous scale.
- Put the definitions of the engagement indicators in the same format as the Engagement Profile to make it easier to refer to
- Create a summary sheet to allow educators to record an overview of the intervention period for general reference, reviews, etc.
- Improved guidance for use.

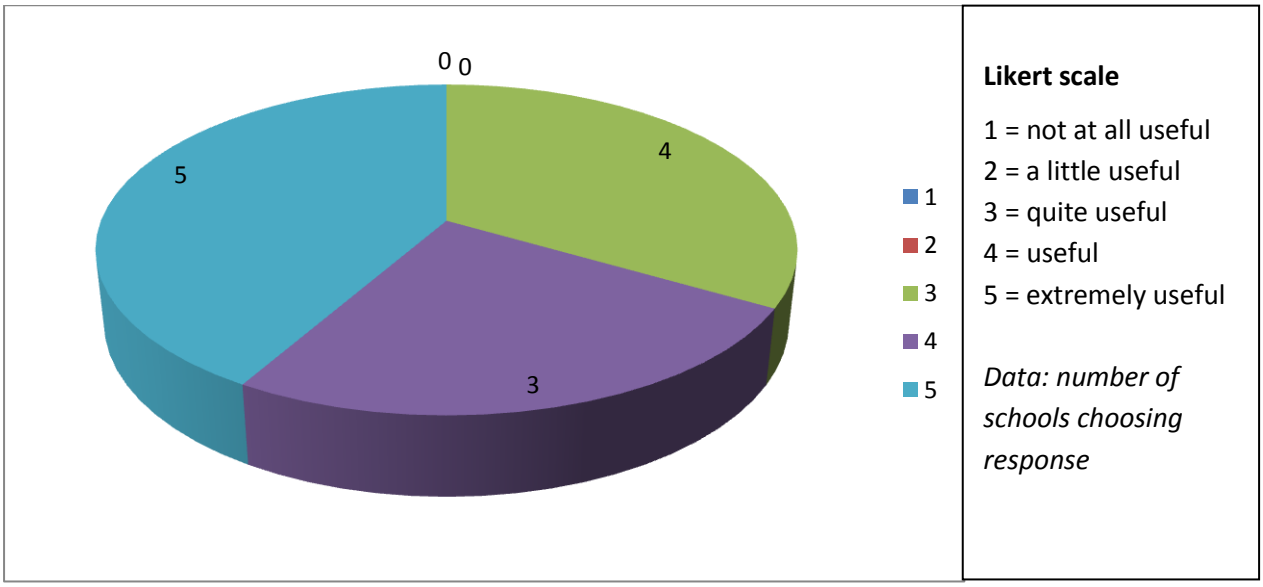
Suggestions not implemented (from educators)

- To dispense with definitions (not done: more people found definitions necessary)
- To make definitions more comprehensive (not done: intended as starting point only on which to base student personalised definitions)
- To rearrange the layout of the scale (not done: spatial constraints)
- To include a choice of different forms of wording (not done: considered too prescriptive, and would reduce personalisation)
- Simplify / pair / reduce indicators (not done: following Trial school feedback day

discussion)
- Make scale 5-point instead of 4-point (not done: single request)

Feedback from Development schools – Phase 1

During their exit interview development schools were asked to rate and comment on their experiences of using the Engagement Profile and Scale.



Eight (67%) of the 12 development schools stated that they found the Engagement Profile and Scale useful or extremely useful, with three schools finding it useful, and five schools finding it very useful. None found it 'not at all useful' or 'a little useful', and four found it 'quite useful'.

> *[The profile and scale] structured our thinking and set strategies with a systematic goal, instead of strategy for strategy's sake*

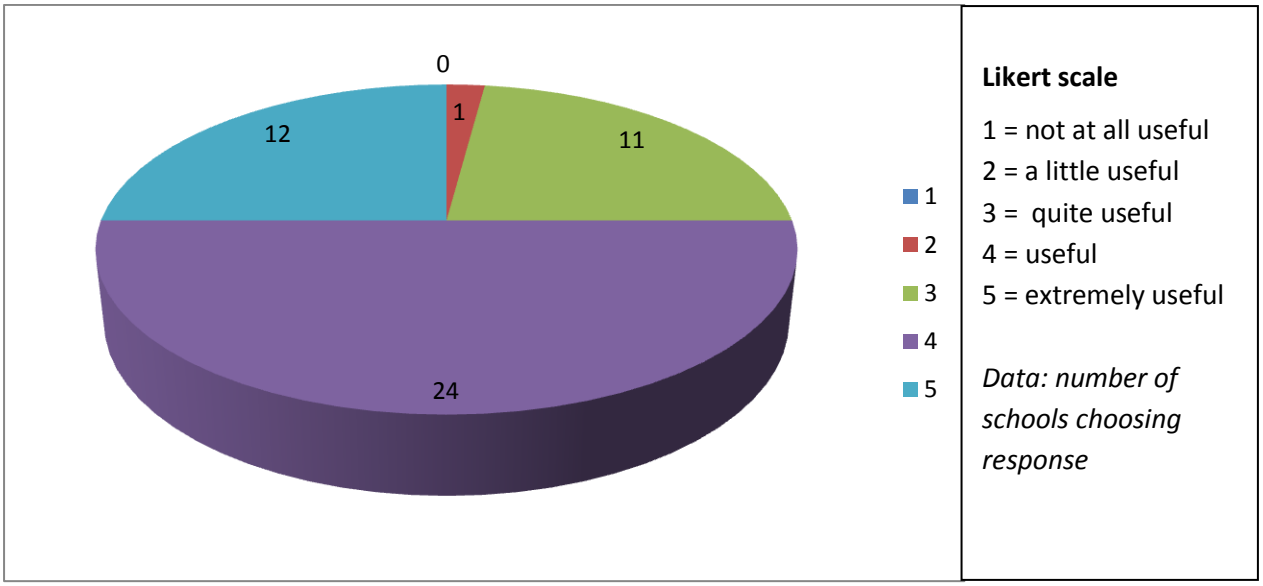
Of the eight schools which commented further, five spoke positively, saying variously that the Engagement Profile and Scale was adaptable (1), and clear and easy to use (2). They stated that the profile reinforced that when engaged, children can learn (1); and noted that the indicators highlighted areas where the student wasn't engaging (1). This enabled educators to reengage students (1). Three schools mentioned its value as a reviewing and assessment resource (1), and in gathering evidence (1). One felt was a good record of successful and unsuccessful strategies (1).

> *There's quite a specific record for you to look back on. If it was a support assistant who had been working with a young person and they were off the next day, someone could pick up – it's like a legacy to work from.*

Of the three schools which had commented negatively one had found the resource difficult to complete, one felt that it needed extending to meet the needs of their student population, and the other felt that many of their students did not show more than one of the engagement indicators. However, the interviewee then qualified it by saying they thought the staff using the resource were missing evidence of student engagement. One school said that they found using the Engagement Profile and Scale difficult at first, but with time it became easier.

Feedback from UK SEN trial schools on the Engagement Profile and Scale

Of the 48 schools which rated the Engagement Profile and Scale during their exit interview, 36 (75%; n=48) schools rated the Engagement Profile and Scale as 'useful' or 'extremely useful': 24 (50%) thought it was 'useful', and 12 (25%) thought it was 'extremely useful'. No schools rated it as 'not at all useful', and one school felt it was 'a little useful'. Twenty-seven schools followed this up, making a range of positive general comments about the resource. Only four schools followed their rating up with a negative general comment, two saying that they did not think the Engagement Profile (as distinct from the Engagement Scale) was valuable.



Forty-eight (98%) of 50 schools commented positively on their use of the Engagement Profile and Scale in terms of the structure of the resource itself, its application or its outcome for students/educators. Three (6%) schools mentioned difficulties they had experienced, and two commented negatively. The Engagement indicators will be considered in a more detailed discussion below.

Forty-five (90%) schools recorded positive outcomes for their students in terms of learning (43; 86%) and/or social/emotional development (29; 58%). Thirty-four schools (68%) commented positively about the resource itself.

The following comments on the impact of the Engagement Profile and Scale on teaching and learning were taken from exit interviews from 50 schools. They were not made in response to direct questions, but were spontaneous observations made in the course of answering other questions:

Curriculum and assessment (39)

- 11 schools (22%) commented on the resource's complementarity to existing curricula and approaches. They variously mentioned P Scales, Routes for learning, Assessment for learning, B-squared, person centred planning and IEPs
- Eight schools (16%) said that it had endorsed their own approaches to teaching and learning, by formalizing it and giving them a systematic resource to record their work with students
- 27 schools (54%) stated that the resource was useful in carrying out observations, assessment, monitoring, target setting and/or planning

Planning, assessment, target-setting and progression

Comments of seven (14%) schools on planning included that it was a very good planning tool (2), which made you look for a deeper purpose (1) and enabled teachers to plan better (1). Three schools noted that the tool allowed very small steps to be put into place.

Fourteen (28%) schools commented on the use of the tools in assessment. Seven stated that the Engagement Profile and Scale was good for assessment / recording / review, with three of these describing it as 'fantastic', 'excellent' and 'great'. Individual schools said that the tool showed where the student needed to develop, backed by numeric and descriptive evidence. Three schools emphasised that for accurate assessment to take place, the assessment task needs to engage the student. Five referred to the importance of the tools in developing an evidence base.

Six (12%) schools said that the tools were helpful for developing targets, and one of these mentioned that they had helped in breaking down the targets for the student.

In the context of showing progression, 12 (24%) schools indicated the relevance of the Engagement Profile and Scale. Three said that it highlighted the need / provided an incentive to move students on, even, as one described, when she thought the student was progressing. Four schools noted that the tool allowed them to show progression beyond the capacity of school assessment structures already in place, with three mentioning B-squared and P scales specifically. One school commented that it was:

An excellent way of monitoring progress and [gaining] useful evidence for lots of background work. It will hopefully also become an evaluation tool of what works for individual children, in the hope that the information learned can be generalised to other activities.

Twenty schools (40%) commented in positive terms on the general structure of the Engagement Profile and Scale, mentioning aspects which they found particularly helpful. Two schools (4%) commented negatively, and four schools (8%) made suggestions for possible structural changes.

> *Thanks to the systematic nature of the skills and the next actions column, an activity has been created that is specifically designed to engage Adam. He now concentrates and succeeds on his ICT activity consistently and clearly enjoys it too. Proof that engagement helps and is the basis of learning.*

Engagement indicators

The most wide-ranging discussion about the Engagement Profile and Scale during the trial and development phases concerned the Engagement indicators and how they could be applied for all students and activities.

The seven Engagement indicators are: awareness, curiosity, investigation, discovery, anticipation, initiation and persistence.

Schools were asked specifically about their thoughts on the individual engagement indicators and the overlap they had experienced. They answered variously – some making general statements, others mentioning selected indicators only, and others working systematically through the list of indicators, so their responses are not directly comparable.

Six schools found that the seven engagement indicators had made the concept of engagement more understandable and more manageable.

Thirty-nine (78%) schools acknowledged an overlap between indicators in relation to the students they had worked with, with 12 schools qualifying this as 'some overlap' and five schools as 'lots of overlap'. The overlap occurred when educators could not determine differences in a student's behaviour relating to a pair or triad of indicators (e.g. curiosity / investigation). The most common overlaps reported for students were between curiosity and investigation (9) and curiosity/investigation/discovery (6). No school mentioned awareness or persistence as having an overlap for any students. Two schools state:

> *Some repetition with the indicators but very useful. We couldn't have filled in the forms without them.*

Very relevant and useful, but to start with it took a while to get used to and use the indicators. And I needed extra time to think about the differences between them. There is overlap but sometimes that's needed.

Following discussion with schools at the UK Trial School feedback day (11.1.11), guidelines were drawn up to address the following concerns which arose from overlapping indicators. After some debate, the schools attending the feedback day unanimously voted that seven indicators of engagement were each a necessary element of engagement and covered all the important areas, but that clarity was needed in how to manage them in relation to individual students. As a result of discussion around the points below, additional guidelines related to the use of the Engagement Profile and Scale have been drawn up.

Identifying behaviour relating to the indicators

Nine schools said they found that identifying indicator behaviours with their students was difficult to start with but became easier, and five schools said they had, for their students, found it difficult to identify behaviours which reflected the indicators. Five other schools said they had resolved this through class team discussion, and two schools stated that through videoing the student, they had been able to see behaviours relating to the indicators which initially they had not.

Anticipation was hard to see sometimes. But awareness and initiation brought to light a lot for our students, and helped break down engagement well.

There is discussion about overlap with words, but I think that is there for discussion with people using the tool. With the Profile, if you get lost on overlap of words it enables you to look back and refocus on what aspect it is you're looking at.

Six schools raised concerns about scoring pairs of indicators, when they could not be differentiated for a particular student. It was advised that in this case the score should be entered in both the indicator boxes until such time as the student's behaviours could be differentiated. In this way, the score would not be lowered if the indicator behaviours were indistinguishable.

Differences in interpretation of indicator behaviour and scoring

It was noted that different people working with a student might have different interpretation of the indicator behaviours. Five schools said that they had resolved this through discussion between all staff involved leading to agreement on what behaviours represented the indicators for that student. Two schools also suggested that for them, there had been a need to determine students' indicator behaviours differently according to the tasks they were engaged in.

There is overlap between curiosity, investigation and discovery, but as long as staff agreed on the definition for each student that was fine. Even though this was initially hard, I wouldn't change any of the words because I found when observing they were all relevant.

A consistent level of scoring students on the scale should be agreed through discussion between all those working with the student.

Scoring positive / negative behaviours using the indicators

Four schools raised the difficulty of whether to score both positive and negative behaviours relating to the indicators. For example, a student could demonstrate positive persistence in completing a task, but negative persistence in refusing to take part. It was agreed in the case of negative persistence that it was important to log the student's ability to persist in the comment box prefacing the scale, but not to score it. Only persistence towards the attainment of the previously identified learning outcome/target would be used in scoring engagement.

Including elements in a task to allow for indicator behaviours

Six schools said that in some tasks they had not found elements which allowed the student to demonstrate indicator behaviours (e.g. discovery, when a task is being repeated), which resulted in a low score. One school suggested that educators should adapt the task to include elements in which the student can show indicator behaviours.

With K it was giving him the opportunities to initiate – [with his usual work] as a set routine, he didn't always have the opportunity to do it. Looking at ways for him to do this is important.

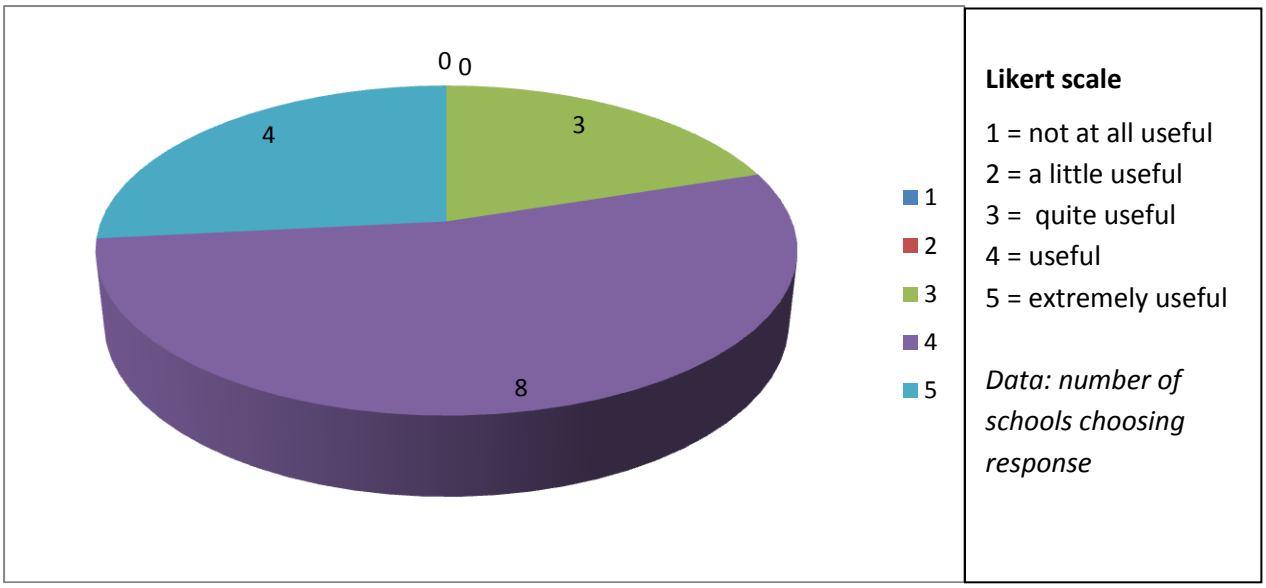
Application of the Engagement Profile and Scale

Six schools made suggestions about how the Engagement Profile and Scale could be used in addition to its primary use as an observation and assessment resource. Suggestions for use were:

- As information to support transition (3)
- Engagement Profiles: as information to support new staff (2), possibly displayed beside student
- To provide evidence of their son or daughter's achievement for families (1).

Feedback from international SEN trial schools on the Engagement Profile and Scale

Of the 15 international trial schools, 12 (80%) schools rated the Engagement Profile and Scale as either useful or very useful: eight schools as 'useful' and four schools as 'extremely useful'. None of the schools rated the resource as 'not at all useful' or 'a little useful'.



Eight of the 15 schools followed up their rating with a further general positive comment. Six schools commented positively on the structure of the Engagement Profile and Scale. Their observations included:

- the Profile had made the educator aware of the gaps in the student's quality of engagement in an activity (2)
- in using the Scale, the process of observation progressed naturally to next actions and progressing the task (1).

It was really useful as a tool to determine the way forward for each child. It focused staff on adapting their own approaches and procedures. They often make an assumption that the student is doing things that they're not.

As with the UK trial schools, the international schools commented positively on the resource's curriculum fit (2), and its usefulness as an observation, planning and/or assessment resource (3). Schools also recorded its positive effect on teaching and learning (4) and educator focus (2). Of these one school stated that the scale had given them a way of recording formally how they were working with their students (1), and other schools had found that using the scale had shown both unrealized learning strengths (2) and surprising gaps (1) in student learning experiences. One stated that it had led them to realise 'the wonderful qualities the student has as a learner'.

It was surprising where the indicators showed there were gaps in learning. It also shows up strengths in learning. For example, I was shocked that K could be quite persistent – I'd thought she would give up easily. However, although she does persevere, she doesn't seek anything. I'm trying to think of ways to increase this learning behaviour.

Another school remarked that the resource had helped educators to respond more rapidly to students' learning needs.

What international schools said about the indicators

The indicators and associated comments will not be discussed in detail in this section as they have been focused on in some detail above when discussing the UK trial schools above, and the issues are similar.

In discussing the indicators, five schools said that initially they had found it difficult to identify indicator behaviours for their students/use the scale but that this became easier with time. Two schools (one additional to the five) noted variously the subjectivity in defining the indicators for each student and the importance of team discussion to address this.

Ten schools referred to the overlap between some of the indicators, and raised issues in a similar way to the UK schools. Three schools noted difficulty with scoring; one stated that they could not comment on the student against every engagement indicator. The most commonly recorded category overlap was curiosity/discovery (4). One school in each case noted a difficulty with sustaining curiosity when a task was repeated and uncertainty with how to record negative/positive persistence in students. The solutions to these issues are the same as those described above for the UK schools.

Additional uses proposed for the Engagement Profile and Scale included as information to support for student transition (1), and as an annual profile for every student in the school (1).

RECOMMENDATION 4

Educators involved in this project have embraced new pedagogy designed around the tenet of engagement. We recommend schools consider the introduction of the Specialist Schools and Academies Trust's Engagement Profile and Scale to aid and enrich student engagement in learning.

Engagement Profile and Scale – Case study 1

Atif attends Year 11 in an all age special school. His statement of SEN includes diagnoses of cerebral palsy, severe learning difficulties, epilepsy and cortical visual impairment. His epilepsy is largely controlled by medication, but regular smaller seizures impact on his engagement in lessons. He has additional difficulties associated with prior streptococcal meningitis and a gastrostomy.

Atif's visual needs are monitored by the Sensory Support Service, and a peripatetic teacher for the visually impaired. His sensory processing is complex and hard to assess, but he can locate sounds by turning his head and tolerates regular tactile input.

Atif presents with severe receptive and expressive language communication impairments relating to profound and multiple learning difficulties. Prior to the project, he communicated through facial expressions, vocalisations and body movements but their interpretation required detailed knowledge and experience of working with him. This restricted the number of people in his life who could respond appropriately to his needs. He has been assessed as working at level P2 across all areas of learning.

Intervention:

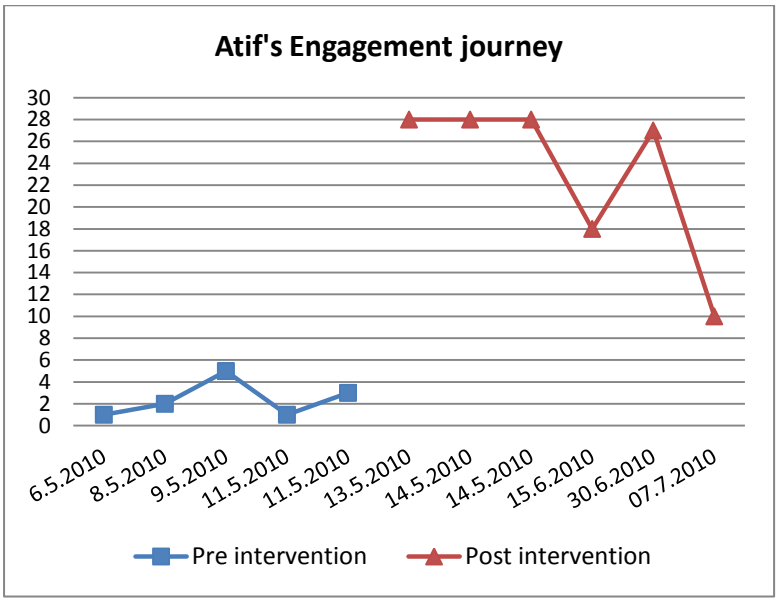
The following engagement target and activity were selected to begin to put in place a more effective communication system:

- Target: To increase communication using alternative technology (AT)
- Engagement Scale activity: (1) to trial different ATs with Atif; and (2) to develop its use with motivating computer programmes

With advice from Dr Phyills Jones from Florida University, a CLDD Research Project advisor, a series of interventions was implemented:

- Intervention 1: Atif was provided with a stationery head switch to build his independence and to teach him consistency with the switch, initially with an ICT jigsaw activity
- Intervention 2: Completing the engagement profile suggested that switching through a series of images to Michael Jackson music would make a more motivating activity for Atif.
- Intervention 3: Atif's positive was changed from the left of the board to the right where his body position allowed for more comfortable viewing.
- Intervention 4: After Atif had become familiar with one switch, a 'yes' switch and a 'no' switch were introduced to allow Atif to further develop his communication skills.

Observations and scoring using the Engagement Scale were carried out to baseline Atif's communication activities and over the period of the interventions (6.5.10 –7.7.10), with reference to the Engagement Profile as a high interest activity benchmark to ensure meaningful scoring.



Explanation

The initial increase in Atif's engagement was due to the introduction of the stationery switch. This massively increased his purposeful switching and allowed him to work independently. He also visibly enjoyed the activity. The introduction of his favorite music as a motivator increased his awareness and desire to discover and initiate more within activities. The decrease in engagement towards the end of the intervention period was due to the introduction of the 'yes' and 'no' switches. This was a new skill being taught, and Atif's engagement decreased in response to this.

This demonstrated to Atif's class team how he learns. He was very engaged when the switching was a simple cause and effect, but when the second switch and new activity needed more cognitive processing he became slightly less engaged. He engaged with learning when the activity was consistent, and he fully understood what was expected. His class team have reported that Atif's engagement has increased again as he has learnt the purpose of the 'yes and 'no' switches.

Engagement Profile and Scale feedback

Atif's class team spoke very highly of the engagement resources and approach. They felt it helped them to look at students and really begin to understand them. It also seemed to give them the time and structure to work on personalising pedagogy for that student. When a successful strategy was found it was generalised to other areas of that student's life.

Conclusion

Atif made tremendous progress throughout the short time that data was collected in the project. Relatively small changes in approaches and the introduction of appropriate technology allowed him to communicate and engage in deep learning. It increased his ability to control his environment. His progress has unlocked his potential as a learner and allowed his teacher to develop new educational aspirations for him. His class team have seen him change from a young man who seemed to have 'nothing going on' into a much happier and proactive person. They have now got the evidence to set realistic targets for Atif and can provide him with appropriate support to achieve them.

The strategies that have put into place have also been generalised into other areas of Atif's life. A switch is now used at home for Atif to control his music and his television choice.

Atif's teacher stated:

> *The data that the engagement profile and scale has generated has been used in reviews to demonstrate how Atif and other students have been engaging within the curriculum. It has been seen as an invaluable resource to be able to validate the engagement that the students have within the curriculum that may not have been demonstrated through traditional assessments...*

Engagement Profile and Scale – Case study 2

Fifteen-year-old Liam struggles with behavioural, emotional and social difficulties (BESD), learning difficulties, stressful life experiences, and negative educational experiences. His low self-esteem and confidence lead to anxiety and frustration, which he expresses in non-compliance, aggression, disengagement, poor school attendance and absconding. While on paper, he did not fit the identified CLDD criteria, the school regarded him as among their most complex students so, after consultation, he was accepted into the project.

Taking an engagement approach to personalising Liam's curriculum, the school devised together with Liam an alternative curriculum in which he was supported one-to-one. In addition to Liam's chosen enterprise of making and selling sandwich lunches to staff, he was required to attend some key classes and a nurture group. His investment in his curriculum gave him a sense of empowerment and commitment. The enterprise focused his interest, and gave coherence to the development of his core subject and social skills in a way that was meaningful and motivating to him.

Overall the trial curriculum was a success. Prior to the intervention, Liam struggled to access the curriculum in any way, and even to stay in class for a whole session. During the trial, Liam remained engaged for whole sessions at a time, even entire days. He demonstrated genuine interest and motivation, remaining in school for the duration of every session. He seemed happier, less anxious and said he enjoyed the projects he was working on and the lessons he had on his timetable.

Liam's engagement in learning was monitored using the engagement profile and scale. Over the intervention period, his engagement score was 22 – considerably higher than the 12 scored for a typical to good level of engagement on the standard curriculum prior to the intervention. The school's positive points system for achievements such as reaching personal targets, adhering to instructions, being cooperative and staying in class for the duration of the lesson system, also showed improvement. He achieved 237 points during an intervention week, as opposed to only 129 for a pre-intervention week. For Liam, this was a great achievement.

Whilst Liam's engagement and attendance has since reduced, the success of the initial two week alternative curriculum trial showed staff that this was the right approach for Liam to access education. They recognised that in the future his timetable would need fine-tuning to maintain positive engagement long-term, and the need for them to remain two steps ahead of him in terms of what they offer, so that he always perceives the activities as worthwhile and interesting. The success of the engagement approach in personalising the curriculum for

Liam has encouraged the school to consider this approach for other students in similar situations.

INQUIRY FRAMEWORK FOR LEARNING

What is the Inquiry Framework for Learning?

The Inquiry Framework for Learning is designed as an online resource for educators in exploring and developing personalised learning pathways for children with CLDD. It supports an approach which focuses on increasing children's engagement in learning in different areas of need, through a process of discussion and reflection. It enables educators to map the processes they go through in exploring and developing personalised learning pathways for students, and gives them a means of demonstrating and justifying this lengthy but very valuable inquiry process. The 'Inquiry areas' provide inquiry starting points from which educators can begin to build a personalised learning pathway for students in a systematic way. Under a series of twelve headings, questions are posed which may be helpful in themselves or give rise to further questions and debate.

The learning needs of students with CLDD are so complex that off the peg approaches, applied to a small class group or even a few students, rarely meet their educational needs. They may be frequently disengaged from learning. Taking an engagement approach allows educators to customise the student's educational experience to their learning strengths and interests so they can learn effectively and progress.

How it works

The Inquiry Framework for Learning is organised in two sections:

1. Preliminary profile
2. Inquiry areas.

The 'Preliminary profile', if fully completed, will result in a foundational document which will guide the educator's learning inquiry.

The 'Inquiry areas' provide inquiry starting points from which educators can begin to build a personalised learning pathway for students in a systematic way. Under a series of twelve headings, questions are posed which may be helpful in themselves or give rise to further questions and debate. The questions are not hierarchical, nor comprehensive, but a stimulation to further inquiry to support the engagement of the complex individual with CLDD.

How the Inquiry Framework for Learning was developed

The Inquiry Framework for Learning was based on an idea developed by Professor Barry Carpenter and Jo Egerton in collaboration with the CLDD core research team. The Inquiry Framework was constructed in reference to the inquiry process that the development school classroom teams went through in developing successful learning pathways for the students they were working with during Phase 1 of the research project (January-July 2010). It was trialled and refined in collaboration with trial schools.

Development schools were asked to record the questions they asked themselves in the course of their students' engagement journeys. These were then gathered together and categorised so that they could become inquiry points of reference for other educators seeking to engage their students. Their questions were further supplemented by those drawn from relevant literature, and in discussion with Project advisory group and steering board colleagues.

The SEN UK and international trial schools were asked to trial the resource, and also proposed additional questions for inclusion.

Suggestions implemented (from educators)

- Additional questions included
- Some questions omitted
- Making the subsections shorter
- Making the format more accessible
- Ability to jump between sections
- Ability to create personalised lists of questions for individual students
- Ability to view a maximum of 5 questions per screen to avoid over-facing

Suggestions implemented (from researchers)

- Making the questions shorter
- Where possible splitting groups of questions
- Ability to navigate easily between the questions and the list of Inquiry areas
- Create a 'How to use' page (under construction)

Suggestions implemented (from advisors)

- Ability to view a maximum of 5 questions per screen to avoid over-facing

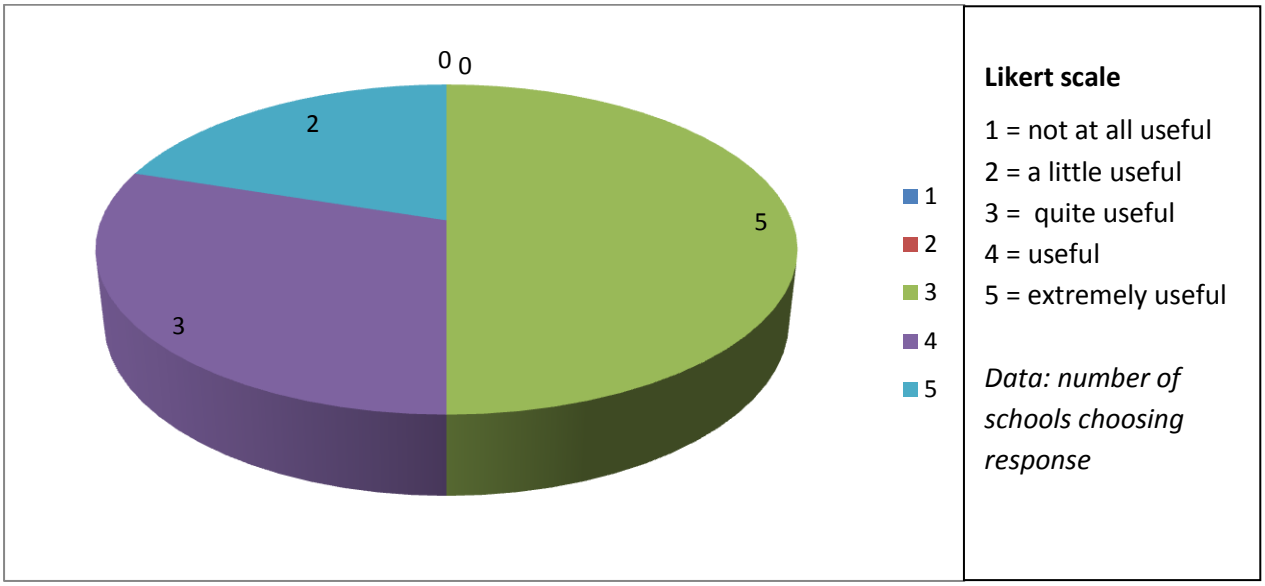
Suggestions not implemented (from advisors)

- Restrict number of questions per inquiry area to 5 questions (this was thought to be too restrictive)

What the CLDD research participants said about the Inquiry Framework for Learning

Development schools

Of the 10 development schools which used the Inquiry Framework for Learning and have completed an exit interview, five (50%) rated the Inquiry Framework for Learning as 'useful' or 'extremely useful', three rating it as 'useful, and two rating it as 'extremely useful. Five schools rated it as 'quite useful'. No schools rated it as 'not at all useful' or 'a little useful'.



Five schools followed their rating up with a number of positive comments, describing it as 'a good place to start' (2), 'gives the bigger picture' (1), 'pushes you in the right direction' (1), 'gives you more confidence' (1), 'structured our thinking, enabling us to set strategies with a systematic goal' (1), good as a tool in the research toolkit (1).

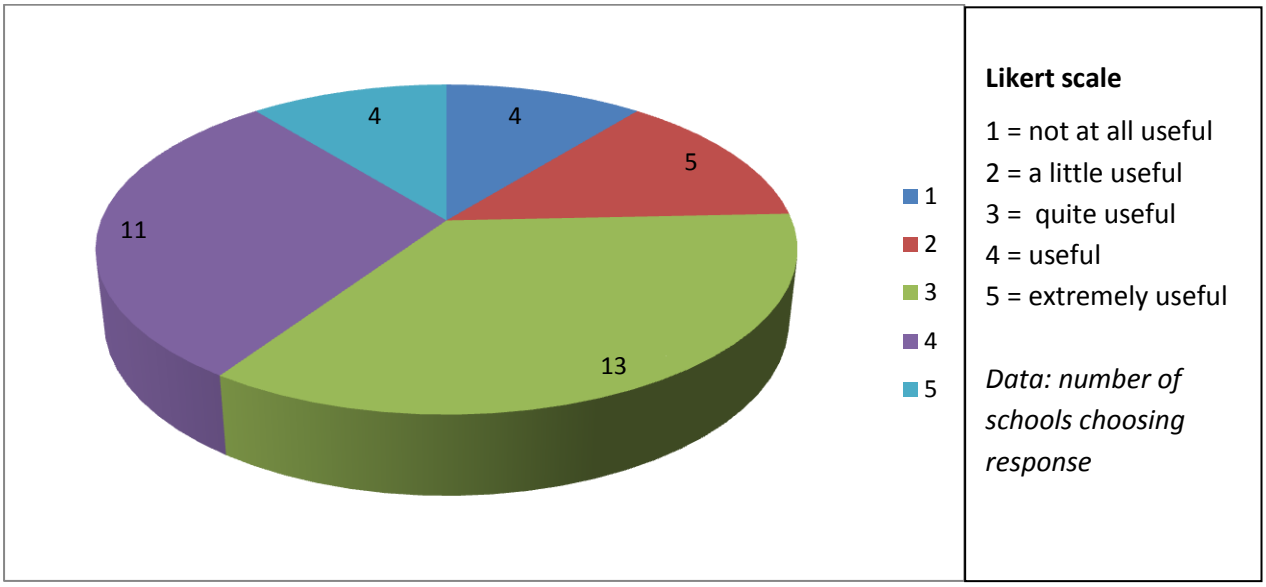
> *I think it's going to be quite a challenge for some schools to sit with an individual in mind and think of the questions they need to ask, but the inquiry framework is a really good place to start, you're not just thinking about that particular lesson or content but bigger picture like environment, family situations, medical conditions, so again it just sort of flags up areas for you to look at.*

Two schools (one additional to the above group) also commented, 'It would have been useful to have had it from the beginning', and 'some schools will find it a challenge to think about questions'.

There were no negative comments recorded in the exit interviews.

UK SEN trial schools

Thirty-seven of the UK SEN trial schools used the Inquiry Framework for Learning. Fifteen schools (41%) rated the resource as 'useful' or 'extremely useful', with 11 schools rating it as 'useful' and four as 'extremely useful'. Four schools rated it as 'not at all useful', and five rated it as 'a little useful'.



Whereas the other two research resources in the CLDD Engagement for Learning Resource Framework were in a preliminary form at the beginning of the Development Phase of the CLDD research project, the Inquiry Framework for Learning was developed from scratch in collaboration with schools. It was therefore at a much less polished stage of development than the other resources. This is reflected in the way the SEN trial schools have scored it, and the comments they have made.

> *They were relevant questions and to do in our plans. Sometimes you get bogged down and you forget. These questions trigger you to remember – the questions were good. However, we found this hard to navigate – there was a huge amount of information.*

There was some discrepancy in the way that schools rated the Inquiry Framework for Learning, some rating it on its potential for usefulness, some on its actual usefulness, and others on its content or structure, as well as combinations of these factors.

After rating the Inquiry Framework for Learning, 23 schools followed this with positive general comments about the resource. Ten stated that it had potential to become a useful resource, four noted its thoroughness and high level of detail. Three other schools variously said that was useful for stimulating debate (1), that it had opened up a dialogue that

otherwise would not have been had (1), and that it was useful for assessment (1) and setting targets (1).

> *Useful for refreshing ways of analysing behaviours, etc and to highlight what we need to be looking out for all the time.*

Four schools made general negative comments, including that they did not see the point (1), that it was isolating (1), and hard to get started (1).

Nine schools commented positively about the content, saying that the sets of questions were thorough and thought-provoking (7), that it contained questions which hadn't been thought of (1), and that it was accessible (1). In the one negative comment about content, two schools noted that the questions in the Inquiry Framework were ones they would have asked anyway.

Fifteen schools made statements about the impact of the Inquiry Framework for Learning on practice. Four schools described it as a resource which supported thinking. Two schools said that it prompted/framed discussion and generated ideas; two that it prompted and jogged memory about which questions needed to be asked; and two that it was good for inspiration regarding students they were stuck with. Two further schools thought it useful for setting targets.

Structure of the Inquiry Framework for Learning

Following the comments made by schools below, the structure of the Inquiry Framework has been substantially revised to address them.

Relating to the structure of the Inquiry Framework, although four schools commented positively, saying that they liked the Inquiry areas and the recording sheets, 32 schools made negative comments about the structure. Eleven schools stated that the Inquiry Framework took too long to access. Other comments included that the format needed to change (4), it was too text dense (8), not user-friendly (7), overwhelming (6) and too much to access (6). Schools said that the navigation (4) and access (4) were hard, and that they didn't like the questions in lists (2).

> *Lots of places to look, not as clear as it could be. If there is lots to look at you lose interest due to time constraints.*

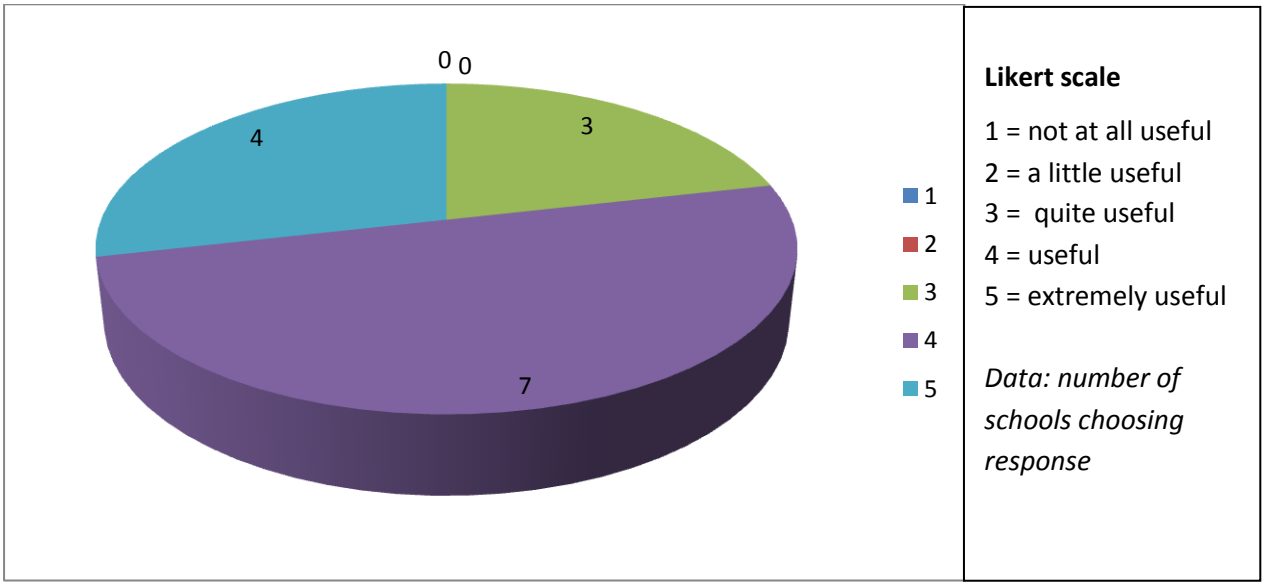
Seven schools made additional comments, two schools warned that 'People looking for answers will be disappointed - it's a guide towards them'. Five schools requested banks of suggestions/strategies/answers.

Eighteen schools made further suggestions, most commonly that the Inquiry Framework needed to be easier to access (4), and presented differently (4). Other comments included that:

- The resource should be interactive (2)
- The categories should be split up (2)
- The organisation should be more hierarchical (1)
- Instructions should be clearer (1)
- The resource should be more concise (1).

International SEN trial schools

Of the 14 international SEN trial schools which used the Inquiry Framework for Learning, 11 schools rated it 'useful' or 'extremely useful', with seven rating it 'useful' and four 'extremely useful'. No schools rated it 'not at all useful' or 'a little useful', and three schools rated it 'quite useful'.



Nine schools followed up their rating with a positive general comment, the most common of which were that the Inquiry Framework was thorough with lots of detailed questions (4) and that the resource made it easy to focus on specific steps for students (2). One school also commented that without it they felt it would have been difficult to move to the next step. There was one negative general comment saying that there was no advice on how the Inquiry Framework related to the Engagement Profile and Scale.

Five schools commented positively on structure, two saying that it was easy to follow, and two that they liked the Inquiry areas. One school said they found it difficult to work it out procedurally, and, together with one other school, that it was too text dense and there were

too many questions. One school requested better web access. One school who completed their intervention at a later date, used both the old and new versions of the Inquiry Framework for Learning. They stated:

> *The recent changes to the framework on the website has made them less daunting to tackle and are now very user friendly. I love that I can print out those questions I feel are relevant to my work with a specific student and look forward to using the framework in future profiles and scales.*

Five schools commented positively on content, four noting that the questions were useful and thought provoking. One school felt that the Inquiry Framework gave a holistic view of the young people.

Two schools thought the Inquiry Framework was a good assessment (1) and personalisation (1) resource.

Seven schools commented positively on the resource's impact on practice, including educator thinking (3) and focusing (1). An international trial school stated:

> *I used enquiry as a method of engaging the staff. This is not so unusual for us. The staff are very skilled and experienced. However, initially, they wanted answers, but by the end they were more comfortable with it being an inquiry. It enabled them to explore more.*

Nine schools made suggestions for further development of the Inquiry Framework including the following:

- Could be in paper form (4)
- Categories should be split up (2)
- Differently laid out with clearer titles (1)
- A suggestion bank (1)
- Further guidance on how to identify priorities and key issues (1)
- Interactive opportunity allowing people to network and share (1)

RECOMMENDATION 5

Complex Learning Difficulties and Disabilities will continue to be a growing phenomenon in all schools. A culture of inquiry will help to meet the learning challenges displayed by these pupils. We recommend that schools use the Specialist Schools and Academies Trust's Inquiry Framework for Learning.

RECOMMENDATION 6

This project's evidence base and outcomes was greatly enriched through collaboration internationally with other schools, universities and experts. We recommend that the International Network for Educational Transformation (iNet), in conjunction with Department for Education, considers frameworks for enabling this initiative to be sustained.

Inquiry Framework for Learning – Student impact case study

Lucy is a six-year old girl who attends a day special school. She has a diagnoses of Angelman's Syndrome, Autistic Spectrum Disorder, Global Developmental Delay and Seizure Disorder. Her barriers to learning are her obsession with food / eating, and her need to mouth objects and substances**.** Lucy's staff team were unsure whether her mouthing was caused by an uncontrollable desire to eat mostly inedible objects (pica), a common symptom of Angelman's syndrome, or the result of a sensory desire to chew and mouth objects due to sensory integration difficulties.

At the beginning of the CLDD Research Project development school phase, Lucy was unable to take part in art activities without constant one-to-one attention. Lucy was driven by a need to mouth resources used in sensory learning activities – paint, foam, cornflour, sand, glue, glitter. Lucy's staff team were keen for her to benefit educationally from sensory play activities, but her difficulties were a significant barrier, and she required constant one-to-one adult support to enable her to participate.

Lucy's compulsion meant that she was unable to respond to either verbal or physical prompting to stop this behaviour. Using the Inquiry Framework for Learning questions, her staff team explored ways forward. The questions and their responses for Lucy are below

Q: **In which situations are these issues a cause for concern?**
A**:** During sensory play involving liquids/semi solids such as paint, corn-flour, shaving foam and granular solids such as sand and glitter.

Q: **What is the evidence?**
A: Lucy's desire to mouth appears to get stronger as the mouthing progresses. She becomes fixated. She starts to display spontaneous chewing motions with her mouth even when not actually chewing.

Q: **In which situations are these issues not a cause for concern with the student?**
A: None known for these substances - Lucy is not deterred from mouthing by unpleasant tastes.

Q**:** **What sensory experiences does the student dislike?**
A: Lucy does not generally display the same behaviours towards non-food solids unless she has started mouthing/eating liquids/granules first.

Q: **What strategies have different people tried so far – successful and unsuccessful?**
A: Lucy does not respond to either verbal or gestural prompts to stop mouthing.

Q: **In what way can we adapt her environment/learning experience/ activity to enable them to focus on learning?**

A: Lucy could be given something alternative to chew (e.g. Chew tube? Chewlery?).

Lucy's class team decided to provide her with Chewlery (chewable jewellery) to see whether by providing this alternative sensory feedback through chewing, Lucy would be better able to engage in sensory play activities.

Evidenced using the CLDD Research Project's Engagement Profile and Scale, Lucy demonstrated tremendous progress. Staff particularly noted that having the Chewlery available seemed to enable Lucy to respond to verbal and physical prompting not to mouth the resources as she was able to mouth the Chewlery instead. Lucy also rapidly overcame her need for the Chewlery too, so that a few months after the introduction of the Chewlery, Lucy no longer required it and was able to engage fully and independently in a range of sensory activities without it.

Lucy's teacher said:

> *Lucy has amazed us. When we started on this journey we were not sure if it was achievable, but she has proved us wrong and surpassed all our expectations.*

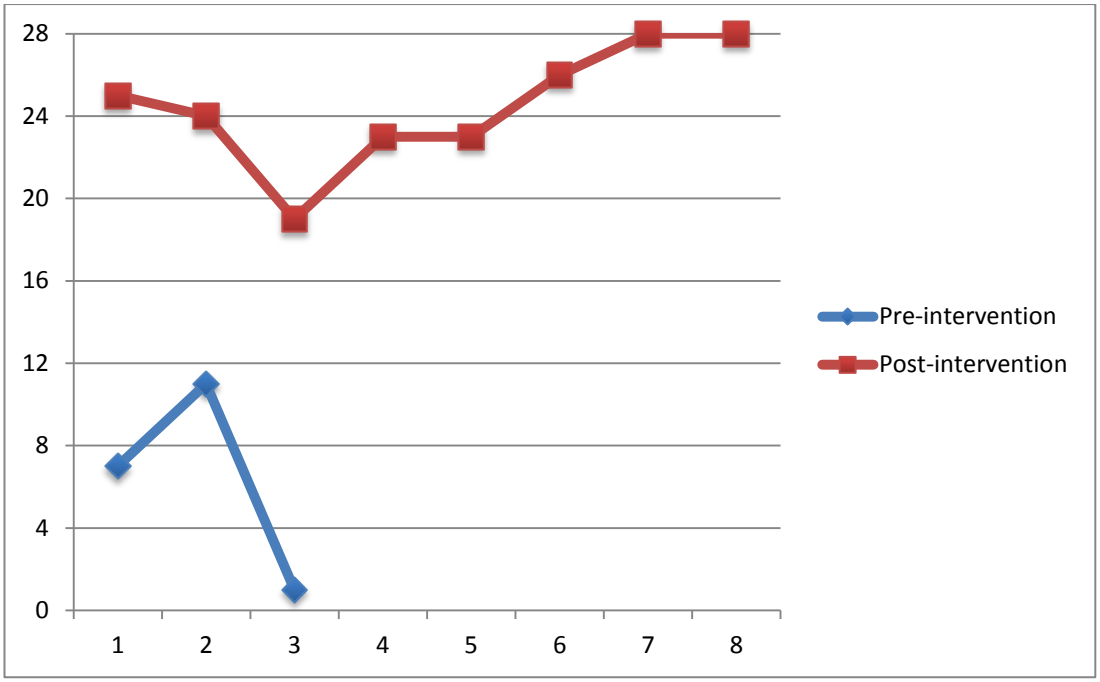


Figure 1. Pre and post intervention engagement in learning evidenced by using the Engagement Profile and Scale

SEN UK trial school – case study

Harry is a young man, aged 8 years, who attends a UK special school. His identified conditions are moderate/severe learning difficulties, attention deficit hyperactivity disorder, obsessive compulsive disorder, oppositional defiant disorder, mental health issues and speech and language difficulties. He has involvement with the occupational therapist, speech and language therapist and play therapist.

At the start of the SEN trial school phase, Harry was entirely disengaged from cookery lessons. He had not been able to participate in group cookery sessions for a couple of years because he was too disruptive during the lesson.

Using the inquiry process it was identified that Harry responded very well to puppets. Puppets were introduced during Harry's cookery lessons as a means for Harry to communicate with the group. Harry engaged with this and used the puppets successfully.

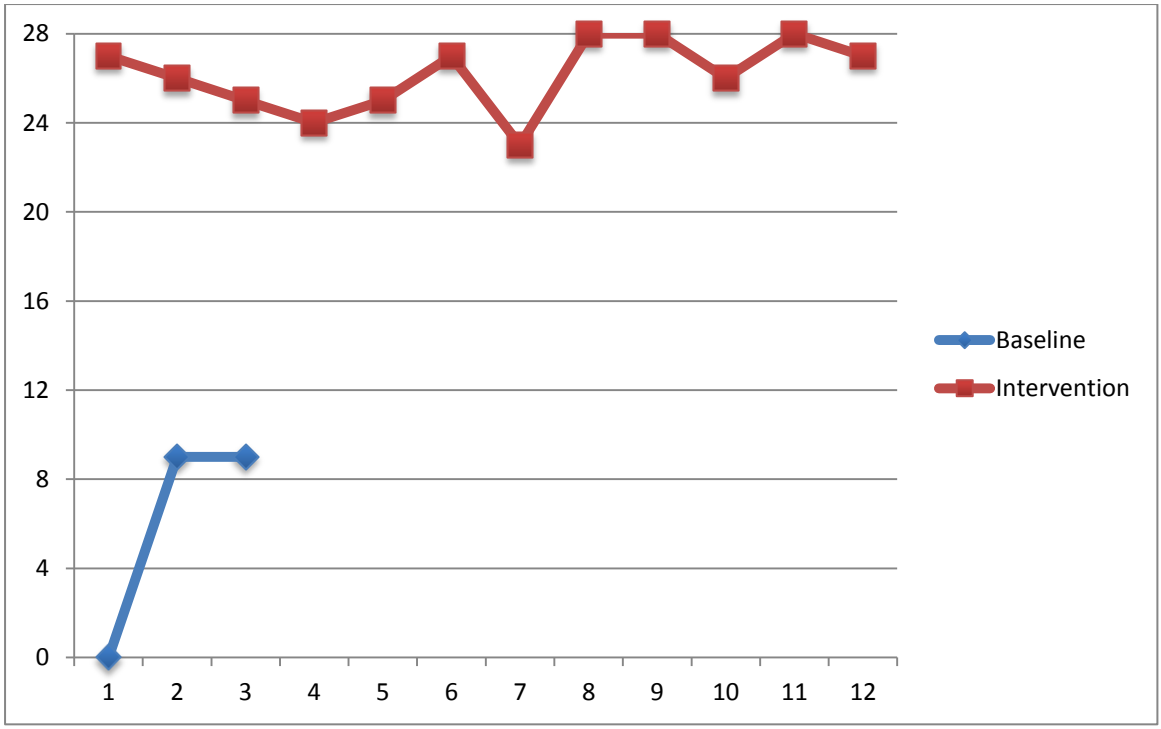
Harry then started using a peer's communication book to participate. In response to this Harry was given his own book. He gradually progressed from using the puppet to using the communication book. Harry is now fully engaging in cookery sessions and has been able to successfully re-integrate with his class group for these sessions.

Target: To engage in food technology and reading lessons.

The following strategies were put in place:
Strategy 1: (27/9, 1/10, 4/10) Cooking session relocated to the classroom. Puppet introduced.
Strategy 2: (11/10, 18/10) Puppet not brought out until Harry independently requested it.
Strategy 3: (5/11) Communication book introduced IN ADDITION to puppet available
Strategy 4: (12/11) Communication book INSTEAD of puppet
Strategy 5: (15/11, 19/11, 22/11, 29/11) Cookery relocated to the Kitchen.

Following interventions and subsequent monitoring using the Engagement Profile and Scale Harry's engagement record's showed a significant increase in engagement in food technology, evidenced in the table and chart below.

Session	BASELINE		INTERVENTION	
	DATE	SCORE	DATE	SCORE
1	10.9.10	0	27.9.10	27
2	13.9.10	9	1.10.10	26
3	17.9.10	9	4.10.10	25
4			8.10.10	24
5			11.10.10	25
6			18.10.10	27
7			5.11.10	23
8			12.11.10	28
9			15.11.10	28
10			19.11.10	26
11			22.11.10	28
12			29.11.10	27



Harry's engagement journey evidenced using the Engagement Profile and Scale

SEN international trial school – case study

Carli is a young woman of 17 years, who attends a Year 13 class in a New Zealand special school. Her diagnosed conditions are hydrocephalus, epilepsy, cerebral palsy (spastic quadriplegia) and visual impairment. She is involved with a range of professionals and agencies including the developmental paediatrician, orthopaedic surgeon, the paediatric rehabilitation services and the blind and low vision education network (New Zealand).

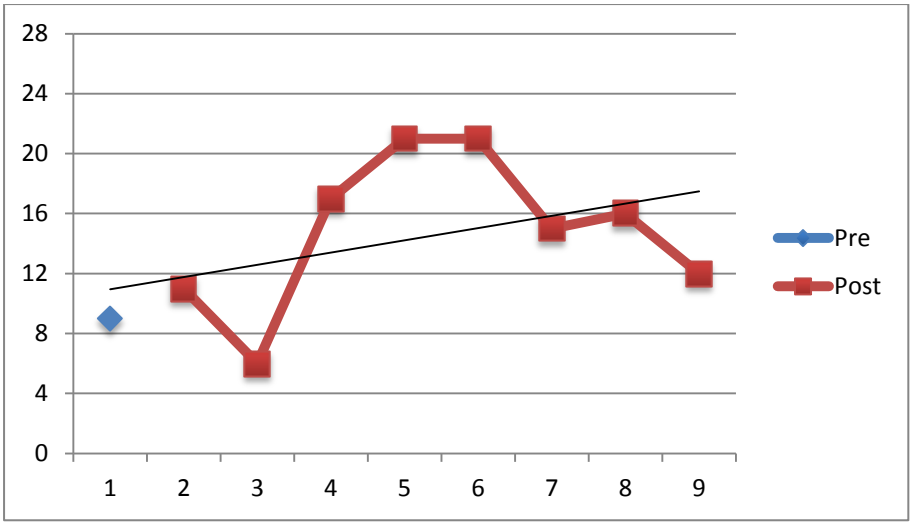
Her class team wanted to motivate Carli to participate in a wider range of classroom activities, and increase the range of activities she could engage in. Their initial step was to channel Carli's principle way of exploring her world – the computer – to increase her engagement in learning through a switch operated PowerPoint presentation.

Target: To explore her environment
Strategies:

1. More time to become aware of surroundings and expectation (22.9.10; 20.10.10)
   Verbal and physical prompts. No tapping on the screen.
2. New high interest PowerPoint presentation (26.10.10)
   Verbal running commentary by adult
3. Add extra slide to go through (1.11.10)
   Add tactile experiences
4. Session took place in the morning (5.11.10; 15.11.10)
5. Tactile resources introduced (16.11.10)

Carli's engagement journey evidenced using the Engagement Profile and Scale

Session	BASELINE		INTERVENTION	
	DATE	SCORE	DATE	SCORE
1	15.9.10	9		
2			22.9.10	11
3			20.10.10	6
4			26.10.10	17
5			1.11.10	21
6			5.11.10	21
7			15.11.10	15
8			16.11.10	16
9			29.11.10	12



Carli's engagement journey evidenced using the Engagement Profile and Scale

Conclusion

Although the strategies in place have been successful, Carli's engagement has reduced following an initial high increase. Carli's class team are continuing to introduce new elements into Carli's learning to maintain her interest and motivation to learn.

Data relating to mainstream and early years trial outcomes

Phase 3: 12 mainstream trial schools and 2 early years settings

At the end of each research phase, exit interviews were conducted in each school with the lead practitioner researcher, who either represented their own views and those of the others involved in the CLDD research project from their school, or involved other staff in the interviews with them. The interview responses from each school were then analysed using categorical content analysis. Answers to all questions were grouped by common emergent themes and the presentation of results reflects this. In each case, educators' comments about the impact of the engagement approach can be categorised into comments relating to the students, educators' practice and whole school.

The analysis in this section represents statements which were specific to one of the CLDD Engagement for Learning resources. Generic statements made by schools about implementing the Engagement for Learning Resource Framework are presented in the previous section.

Bracketed numbers which follow data statements indicate the number of schools sharing a particular view. The word, 'school', used in association with a data outcome, refers to the professionals involved in the project within the school unless stated otherwise (e.g. 'the whole school'). Although the numbers of schools involved in most phases were small, percentages outcomes are given where helpful for comparison across phases. Unless specifically stated otherwise, the percentages given are in the context of the whole participant school group.

The data in this section is summarised in the discussion at the end of this report.

MAINSTREAM SCHOOLS / EARLY YEARS SETTINGS ANALYSIS

> *Every child learns in different ways. Personalising their learning through engagement is a fantastic way of bridging the ever widening gap between a disengaged, disillusioned and despondent child and a wonderful world of knowledge, enabling the child to learn in an innovative, interesting and achievable way. (Mainstream primary school)*

In the mainstream trial of the Engagement for Learning Resource Framework, there were 12 mainstream schools (six primary and six secondary) and two early years services. During the trial period (January – March 2011), each school used the Engagement for Learning Resources to collect evidence for two students with CLDD. Following an initial CLDD project induction day, schools were supported for four half days by an allocated research assistant/consultant. This typically took the form of one visit near the start of the period, one at the end, and the remaining visit(s) in between. Schools completed a semi-structured exit interview during or following the final visit.

In this presentation of results, the Early Years outcomes are presented separately from the primary and secondary mainstream schools. This was because in the early years support service settings, while the children partially attended a mainstream school, they were part of a small learning group of children with disabilities at the support service where the interventions were carried out. Also there is a very different curriculum focus in the early years compared with primary/secondary education, and the responses to the exit interviews by early years educators set them apart as a distinctive group.

PRIMARY AND SECONDARY MAINSTREAM SCHOOLS

Engagement as a concept

As with the special schools, mainstream schools were asked to comment on engagement as an approach to effective learning for young people with CLDD. Ten of the 12 schools stated that the engagement approach was very important, using such descriptors as ‘essential’, ‘brilliant’, ‘very good’, ‘highly appropriate’, ‘really helpful’, ‘important’. Four of these commented that without engagement, no/only limited learning took place, and two saw it as the key to personalisation. Another described engagement as:

> *Look[ing] beyond the curriculum in order to enable access to the curriculum*.

The remaining two schools (both secondaries) while positive about the principle, did not make an evaluative statement in their response. One of these, together with another school, said that they already taught with a learner engagement focus, one adding that the CLDD research project resources had been valuable in validating that approach. Conversely two schools said that the engagement approach had offered them a new perspective.

Would the schools continue to use the resources in their future practice?
Schools were asked whether they would continue to use the Engagement for Learning Resource Framework after the research project had ended. Eleven of the 12 schools stated that they would, and eight of the schools were emphatic about doing so. The remaining school said that they would probably do so.

By the end of the research project, one secondary school was drawing up plans to roll out the resources not only for their students with SEN but across the whole school, although not simultaneously, for all students. This school, along with two others, stated it would be difficult for more than one student per classroom to be involved in the Engagement for Learning approach at any one time due to its intensity. By the end of the trial period, three other schools had already extended their use of the tools for students not involved in the project, and one other intended to do so.

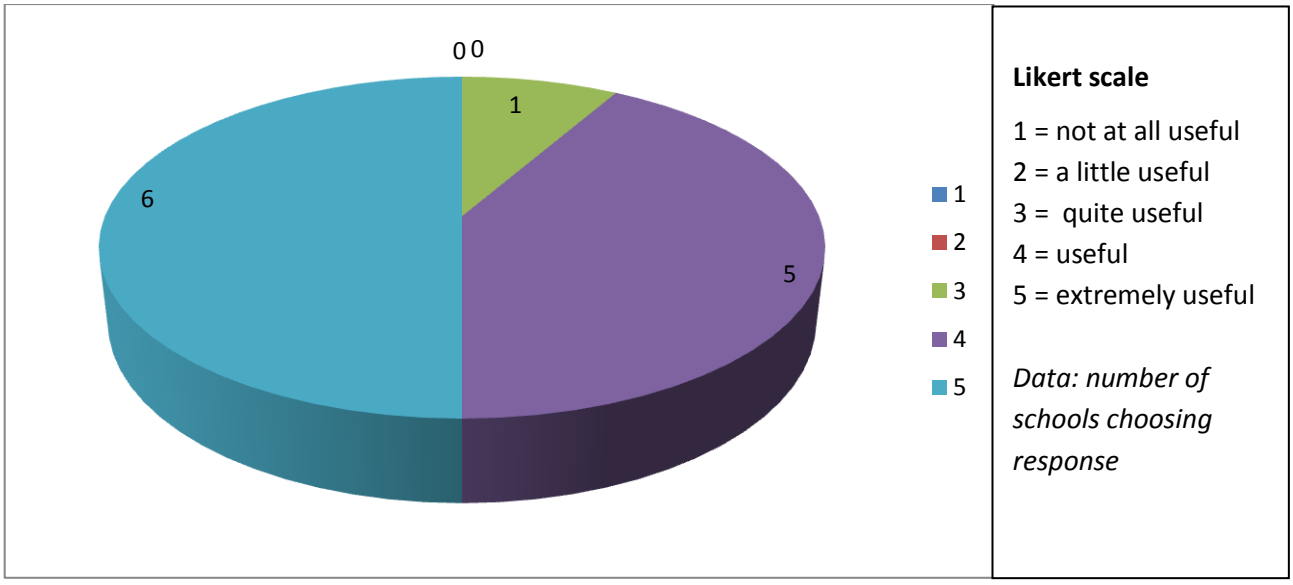
Seven schools described the ways they intended to use the resources post-project; for example, in initial student assessments (3), in annual reviews (2), as an intervention when learning had broken down for a student (1) and to support individual education plans (IEPs) (1). Two of these schools, and one additional school, noted the resources' potential as a training/coaching resource for staff.

Professional response to the CLDD Engagement for Learning Resource Framework
During the exit interview, the schools were asked to rate and comment upon the three Engagement for Learning Resources based on their experience of using them.

Engagement Profile and Scale

> *It enables the user the opportunity to not only observe, but understand the child, their needs and how best to personalise their learning to support them and complement the child's existing qualities.* (Mainstream primary school)

The twelve mainstream primary and secondary schools involved in the mainstream trial of the Engagement Profile and Scale were asked to rate the usefulness of the tool.



As can be seen from the pie chart, 11 (92%) schools thought the tool was 'very useful' or 'useful. Five of the 12 schools rated the Engagement Profile and Scale as 'extremely useful', six schools rated it as useful, and one school rated the tools as 'quite useful'. No schools rated the tool as 'not at all useful' or 'a little useful'.

Apart from a few general comments – one school described the Engagement Profile and Scale as 'innovative' (1), and another anticipated that 'With these resources, the impact could be huge on children' – the schools' positive comments on the Engagement Profile and Scale could be categorised into:

- Insights gained into the student as learner (11)[90]
- Support for professional activities (12).

Insights into the student as a learner

Educators described the benefits of using the engagement profile and scale, as helping them to know the real child (1), giving them a deeper understanding of where the student is coming from, and why they do what they do (2), enabling them to interpret the students' behaviours correctly (1). They spoke of the importance of personalisation (3), and said that the resources had helped them to find out how the student engaged (6) in terms of the conditions they needed, what motivated them, and what helped them to sustain engagement. One teacher said that her involvement in the CLDD research project had made her realise that:

> *…there is a way to engage even the most difficult child through the use of what can be very simple strategies. It has been rewarding to see that the two children have made steps that might appear small for the majority of children in mainstream but are great strides for those with complex learning needs.*

[90] The twelfth school's students also showed positive learning outcomes in the engagement data collected, but in answering the exit interview question which asked for 'the most important outcome' for students, the school held to the spirit of the question and gave a single response.

Another suggested that it allowed them to respond to a student with an indeterminate difficulty:

> *When there is a little niggle with a pupil, [even] when you don't know and parents don't know [what it is], you can identify the area and target that area.* (Mainstream primary school)

Outcomes for students

In the course of the interview, educators were also asked to comment on the most successful outcome for their students of being involved in the research project. Schools described not only learning outcomes for the student (11),[91] but also emotional wellbeing outcomes (12), including:

- Improved social relationships (9) – with staff, peers and families
- Being more settled/happier (8) – including increased confidence (3), improved self-esteem (2), a sense of achievement (2)
- Improvement in behaviours that challenged educators (4).

One school described what this had meant to one of their pupils whose engagement intervention target had been 'To communicate appropriately with staff and peers during lessons':

> *[His] behaviour hasn't stopped completely, but he is more focused and more aware of his own behaviour. Before [the engagement intervention] he didn't know that his behaviour was inappropriate. Now he can tell you it is and adapt it in line with instruction from a teacher… He can see that his behaviour causes problems. He said to TA he would like to have a fresh slate with some of the students in the school. He understands that some of the students don't like him. He wants to start over.* (Mainstream secondary school)

Learning outcomes which schools (12) described for students were categorised into:

- Effective supportive structures for learning (5)
- Learning behaviours (4)
- Knowledge, skills and understanding (4)
- Independence in learning (4)
- Communication (3)

One school described the effect that putting in visual structure for one of their students had had not only on her school life, but at home as well:

> *[L] has gone from exclusion to attending lessons and asking for extra work. She's improved her grades. Only a week in science so far, but [L] said that the strategies are helping her. She has become more aware of what her needs are and when to ask for help. She has been able to use what she is doing in school at home... She has a visual shower routine. [L] is happier.*

[91] The twelfth school's students also showed positive learning outcomes for their students in the data collected, but in answering the exit interview question which asked for 'the most important outcome' for students, they held to the spirit of the question and gave a single response.

[She] said yesterday, 'I used to tell my mum I hated this school. I don't tell her that now.'
[Mainstream secondary school]

Three schools said that the project resources had freed them from the curriculum, removing the focus on gaining curriculum levels (2) or on behaviour (1). As one secondary school said of their CLDD research project students:

Instead of failing all the time, they can succeed.

Engagement Profile and Scale as a support for professional activities

In their responses to the exit interview, all 12 schools identified areas in which the Engagement Profile and Scale supported their professional practice. The exit interview did not include prompts for educators to consider these areas, but the comments, made spontaneously, could be allocated to them:

- Target setting (8)
- Enabling focus (6)
- Assessment and monitoring (6)
- Observation (5)
- Thinking and reflection (5)
- Planning (4).

(Four educators also referred to impact on professional development; this is discussed under the 'Professional development' heading below.)

Five schools said that the Engagement Profile and Scale gave them a focus (4), and that this helped them understand what was 'going on' in the lesson (1). One of these schools, together with three others, commented that the tool had been useful in directing their thinking, saying that it had helped them think 'outside the box' (1), had changed the way they thought (1), and given them time to reflect (1) and a framework for reflection (4).

Eight schools stated, either directly or indirectly, that the Engagement Profile and Scale had supported them in setting targets for students. Individual schools commented that the tool 'made you think of things you hadn't thought of' and address issues which had not been addressed before. They said the tool provided 'hard evidence' on which to base targets, and helped them to consider what was successful and what could be changed. Six of these eight schools found the 'next action' structure useful.

Four schools said that the Engagement Profile and Scale supported planning, one adding that it had helped them take individual needs into consideration when planning. Another educator said that they had started to base their planning on the indicator words.

Five schools commented positively on the tool's value for observations, one saying it was better than previous observation frameworks they had used. They felt it gave them an observation framework (2) and ensured that all areas of engagement were covered (1).

Six schools spoke positively about the tool's ability to support assessment and monitoring, one saying that it allowed them to detail progress, and another that, using the tool, they were able to say why something was happening. All six stated it was effective in showing progress, two saying they liked the visual presentation of progress, and another appreciating that they could now quantify engagement.

Difficulties

Three schools said that they had found the engagement profile and scale difficult to understand, but, when asked to rate the effectiveness of the tool between 0 (not useful at all) and 5 (extremely useful), one had rated it as 5, and two had rated it as 4. A further five schools said that they had found the tool difficult at first, but that it had become easier as time went on. Of these, all but one, who rated it as '3', had rated the tool as 4.

The only other general concern raised by two schools was the intensity of support for one student amongst a classroom of others.

Key indicators of engagement

> *Breaking down the components of engagement – we've never been able to do that before.* (Mainstream secondary school)

In assessing students' engagement, schools were asked about the usefulness of the key engagement indicators used in the Engagement Profile and Scale:

- Awareness/responsiveness
- Curiosity
- Investigation
- Discovery
- Anticipation
- Persistence
- Initiation.

Nine of the 12 schools liked the indicator terminology. One school responded:

> *I liked using the indicators. They made you think of things you wouldn't necessarily think of. They are not really things you would look out for otherwise. They are important for [E] – if he is curious, he will work and engage better.*

Another commented:

At first I thought they were a nightmare to be honest. But then after putting them into context for particular students, they are really helpful. The language I thought was a bit difficult to access specifically what each area meant, but then after going through the process, I thought they were exceptionally good, so worth sticking with.

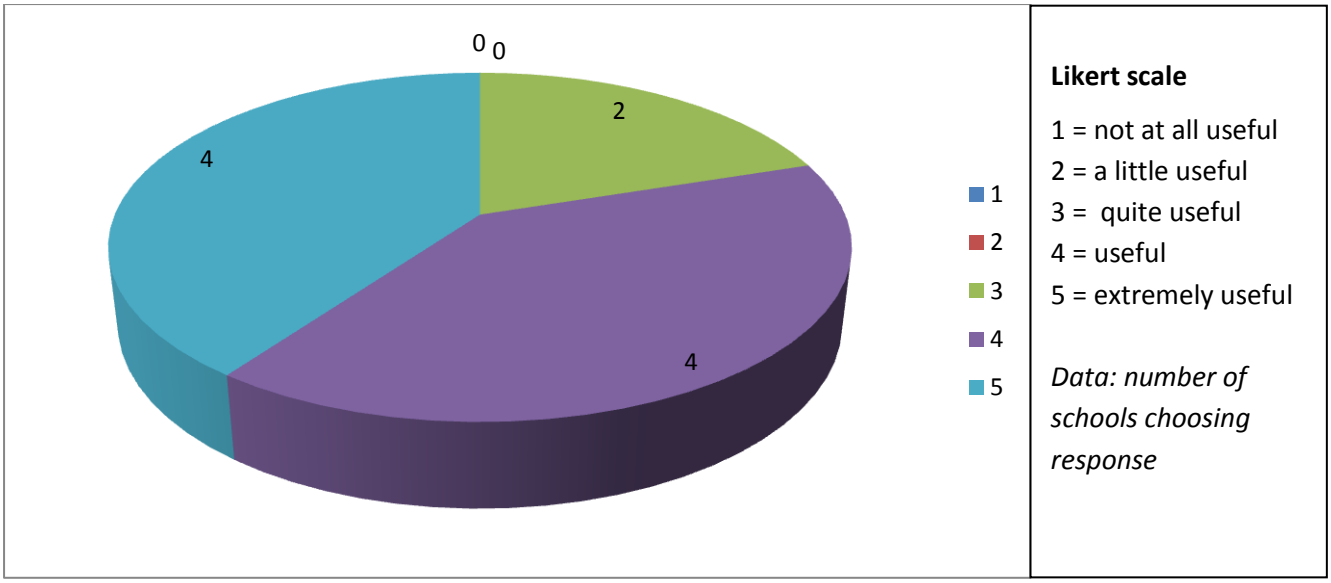
One school noted the benefit of having a shared terminology between staff to describe how the students were learning.

Three schools mentioned difficulties they had found in using the indicators: an overlap in defining indicators for the students they were working with (3); not all the indicators applying to every activity (1); and knowing whether to score indicators where the student's actions did not relate to the learning activity (1). All these issues were addressed in the initial induction day for mainstream school as follows:

- Where indicators overlapped for a particular student, they should be given a combined score which was then allocated to both indicators when scoring the scale. Through the SEN trial, it was been apparent that the type of overlap between indicators was largely dependent on the individual student.
- Some of the indicators might not relate continuously to a particular activity over a period of time, and this should be noted in relation to the score; however, the indicators should not be discounted, as the intention would be for appropriate opportunities (e.g. for curiosity, discovery, initiation) to be created within the activity at a later date.
- Where a student demonstrated an indicator in a negative way during an activity (e.g. persisting in not doing something), the quality (i.e. persistence) should be noted in the text box provided as an example that the student was capable of persistence, but not scored because it was unrelated to the learning outcome.

CLDD Briefing Packs

During their exit interview, the twelve mainstream schools were asked to rate and comment upon the CLDD Briefing Packs.



From the above pie chart, it can be seen that no schools rated the CLDD Briefing Packs as 'not at all useful' or 'a little useful'. Four schools rated the packs as 'extremely useful', four schools rated them as 'useful' and two schools as 'quite useful'. Two schools had not used them.

Schools commented on:

- Content (5)
- Format and structure (2)
- Usage (6)
- Changes (2).

There were no comments on difficulties.

Following on from their rating of the CLDD Briefing Packs, four schools described the contents using words such as 'excellent', 'very informative', 'interesting', etc. Three described them as giving clear guidelines and explanations. One said they provided an easy overview of the conditions, and three others liked the opportunity to gain a greater understanding of student conditions. Speaking of the structure, two schools said they liked the format – in which three sheets gave information at different levels of complexity to support educators in immediate classroom practice at the simplest level, and providing a platform for more in-depth exploration of the condition at the most detailed level.

> *I have shared sheets with a spectrum of professionals from student teachers, TAs, teachers and professionals in that area, but they have been relevant to all of them. With three types [of sheet, the packs] are useful for all types of staff no matter what their level of knowledge.*

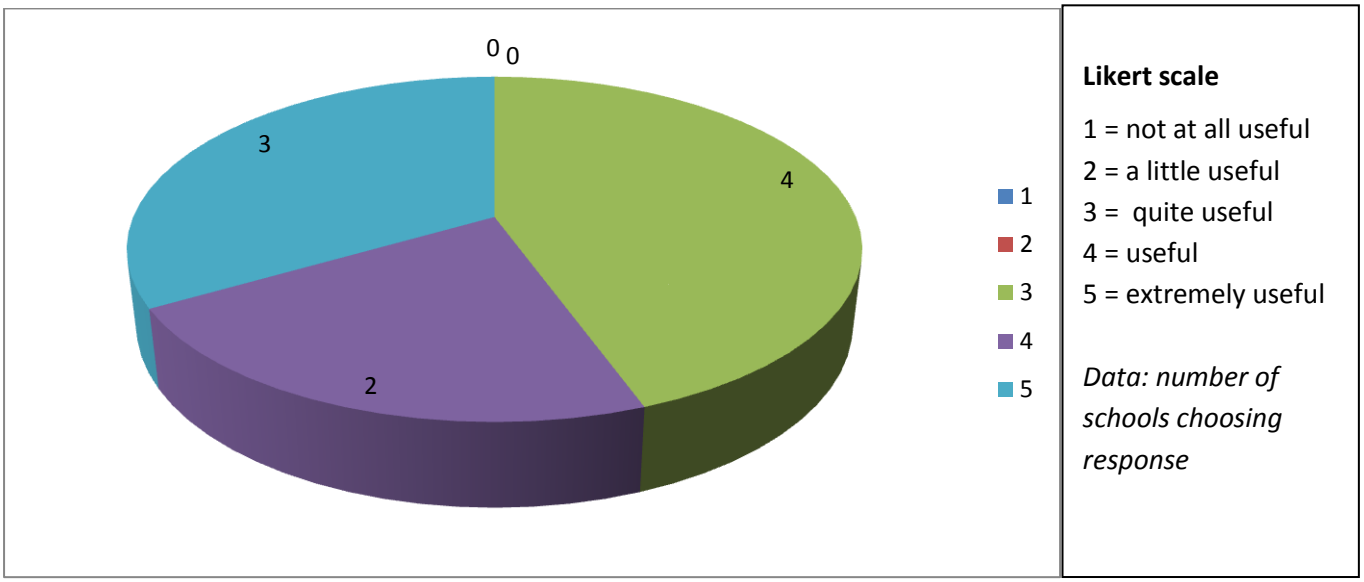
Six schools spoke about actual and potential usage of the CLDD Briefing Packs. Of these, three had shared them with other colleagues. Four thought they would be useful as an induction or training tool, although two stated that the packs should be used alongside real-life examples of known

students to gain an individual perspective, and another cautioned against a lack of flexibility in applying them to individual students.

Two schools suggested possible changes to the packs – an associated form which enabled personalisation, and added suggestions on liaising with other professionals – however both these fell outside the intended scope of the packs.

The Inquiry Framework for Learning

Nine of the schools in the mainstream trial rated and commented on the Inquiry Framework for Learning; the remaining three schools did not use it.



From the above pie chart, it can be seen that no schools rated the Inquiry Framework for Learning as 'not at all useful' or at 'a little useful'. Four schools rated it 'quite useful', two rated as 'useful', and three rated it as 'extremely useful'. The four schools which gave a 'quite useful' rating were all primary schools, while those rating it 'useful'/'extremely useful' were all secondary schools.

Six schools made positive comments about the Inquiry Framework, two schools describing it as 'very useful' and 'very good'. A third stated it was useful, saying:

> *In its current state, it has brilliant questions that really do help you to think and formulate strategies and think how to move your child on and personalise their learning; [however], it is such a huge thing…you have to pick your way through it to make it relevant to your individual child. You need to be able to go straight to [relevant] area and to be able access [section] headings first.* (Mainstream primary school)

Although another of the above schools described the tool as 'easy to use', this quote illustrates the dilemma between valuable information and the format of the tool described by other schools which trialled it.

One school felt that before accessing the Inquiry Framework for Learning it was necessary to understand the student. Five schools, including two of the three commenting positively above, identified benefits which came from using the Inquiry Framework, saying that: it had been a trigger to think and reflect specifically about individual students (4); it validated thinking processes and approaches (1); it helped practitioners to be more reflective (1); and that it would be useful in conducting a basic assessment when students came into school (1) and framing discussions in reviews (2).

However, three of the above schools which commented positively also said that the Inquiry Framework for Learning needed to be more accessible. One of these and two further schools said it was too lengthy and time-consuming.

Since these exit interviews the Inquiry Framework for Learning has been revised in accordance with the above comments which, it is hoped, has improved accessibility and clarity.

Issues arising during the research for schools

Schools were asked what issues had arisen for them during the research, and how they had addressed them. The responses could be categorised under the following issues:

Time

All schools except one (11) said that finding time to observe, reflect and write up was an issue. In this one school the SENCO who had co-ordinated the project said that she had time allocated within her working day for such activities, and acknowledged the her situation was probably unusual. Educators overcame issues of time by:

- Adapting their own, other staff and/or students' timetables (3)
- Requesting additional non-contact time (2)
- Prioritising the CLDD focus over other commitments (1)
- Sharing the CLDD commitment with other members of staff (1)
- Adapting their complex observations, making them shorter and less detailed (1)
- Supporting the student in the earlier part of a lesson to 'buy time' for observations (1)
- Being flexible and adaptable (1).

Three schools said that timetabling CLDD research meetings for staff involved was difficult (2) and had to be 'on the hoof' (1).

Human resources

Human resource difficulties were a factor for seven of the 12 schools. One school mentioned the number of teachers involved with each student in secondary school (1); two others mentioned that educators found HR difficulties stressful – in one of the two schools the TAs felt unsupported by both the SENCO and senior management. Two of the seven schools overcame their issue by involving TAs in their research.

Disruption

Schools found that their CLDD research plans were disrupted by unforeseen circumstances; for example, student absence (2); student mood (e.g. anxiety/boredom) (2) – addressed by changing the environment/context respectively; and complete disengagement by student (1) – addressed by generalising features of other successful activities. Another school sought outside advice to successfully engage one of their CLDD research students.

Engagement for Learning interventions

Engagement Profile and Scale: Four schools said that uncertainty over the engagement indicators relating to overlaps of definition had been an issue with their students. Two schools resolved this through team discussions; another focused on one of the overlapping indicator pair, and then used the resulting score for both; the final school focused only on the indicators that related to the student's activity. Another school mentioned being uncertain how to record outcomes when the student shifted between being engaged and not within a single lesson.

Making intervention resources: One school got around the time issues in making specific resources for the students' target by linking it to another of the student's learning outcomes and involving the student in making them.

Advice to other schools

Mainstream schools were asked to offer advice to other schools which might be involved in a research project with the CLDD engagement for learning resources. The advice can be summarised as follows:

- Encouragement for schools to take part (4)
- The project should be entered into whole-heartedly with commitment and enthusiasm; time needs to be dedicated to it (3)
- Plan ahead of starting the practical research – reading project information; identifying students to take part and their targets; timetabling interventions to take account of existing commitments of staff and students; allocating time to observe, reflect and write up (4)
- Carry out the research as a team in order to: ensure the project stays on track; ensure a consistent approach; provide people with support; and prevent them from becoming isolated (5)
- Make sure the research approach is effective – liaising with outside agencies involved with the student; consistency; taking the intervention in stages; being creative; making changes to interventions one at a time until right; seeking advice; generalising to other settings; involving the student themselves (8)
- Be persistent, resilient and flexible; do not become despondent if something does not work (6)

Professional development

At the end of the exit interview, seven schools commented when asked whether they would like to add anything else to what they had already said about the CLDD research project. Four schools said variously that they had really enjoyed it (1), found it very rewarding (1), were glad they'd taken part (1) and that the project had really motivated them (1), although two said that at the beginning of the project, they had felt overwhelmed by all the information they had to assimilate. A further school said that the CLDD research project had been beneficial and helped them 'move forward'. The

remaining comments were one-off positive or general observations about their involvement in the research. There were no negative comments in response to this question.

Schools were also asked what they would take away from the project. Six, including three of the above schools, expressed this in terms of personal professional development, while others observed the wider impact on staff:

- *Since receiving the project resources, I am not stressed any more. I feel empowered. It has built my confidence. This project has provided training.*
- *[The CLDD research project] refocused me with reference to SEN… it's made me realise that the behaviour is masking the SEN diagnosis.*
- *[The CLDD research project] benefited us both [educator and student], especially my practice.*
- *The different responses from the staff [to the research] has made us learn a lot about where we need to improve.*
- *It's been a massive eye opener – honing staff skills.*
- *The project has helped [staff] focus on [students'] individual needs, and the variety of needs that has to be taken into account when planning any activity for them.*

Finally, three schools (including one additional to the above) saw the Engagement Profile and Scale as a vehicle for professional development, two saying that it was useful in coaching staff, and one that using it was equivalent to training.

> *[It] has been useful for me to open up useful dialogues with staff. Where there is a definite improvement and a learning process for staff and students that is very clear... This is a nice way to develop staff – it's a nice coaching tool – to enable conversations about student.*
> (Mainstream secondary school)

Mainstream case study

Evie is a nine year old girl with a diagnosis of ADHD and Asperger syndrome, who attends a mainstream primary school. She has support from a range of professionals, including the local educational psychology service, the assessment and care management team, the communication/autism team, a consultant paediatrician, a clinical psychologist (CAMHS) and an occupational therapist.

Evie had positive learning strengths. She was ready to engage in activities, and asked questions (e.g. 'What are we supposed to be doing?') or commented about work (e.g. 'Don't know the answer.'). She could ask for help, but not always in the correct manner. She liked doing jobs for her teacher, and to help her peers. However, she also had difficulties which her teacher wanted to address. These included a misunderstanding of social issues resulting in: a lack of awareness of other people's personal space; inappropriate volume of voice; lack of understanding of appropriate behaviour; misinterpretation of social events; and a tendency to be physically aggressive. Evie thus found participating in social interaction groups difficult.

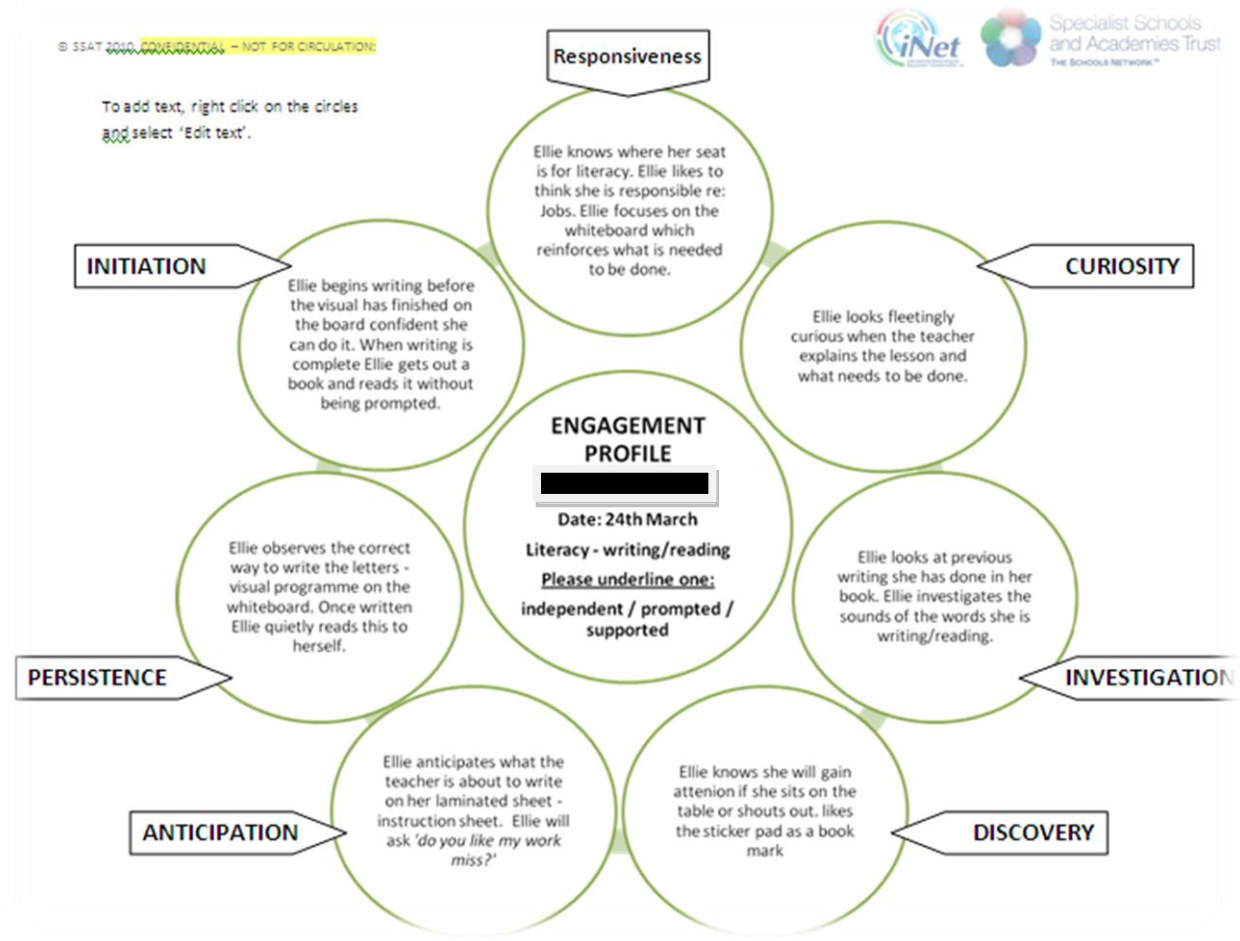
The teacher had already put in place some positive interventions for Evie. Evie had responded well to:

- Use of visual timetables and task board; however, the use of visual prompt cards had not worked, as Evie had either hidden them or given them away
- Having tasks/jobs to do
- Frequent positive reinforcement.

Evie's Engagement Profile

An Engagement Profile was carried out for Evie around a high interest activity, and her behaviours against each of the seven engagement indicators were noted. Using Evie's demonstration of behaviours in this high interest activity allowed her class team to develop high expectations of how she could potentially behave in other lessons if she was able to engage. The class team also reviewed the Engagement Profile to find out what elements Evie found particularly engaging about the activity, and thought about how they could generalise any engaging aspects of the high interest activity to one of Evie's low engagement activities. Evie's engagement for learning behaviours in the low interest activity were scored in the context of her high interest activity behaviours, which were taken to represent a high score benchmark of four on the Engagement Scale.

Evie's Engagement Profile is shown below.



Evie's engagement scales

Following discussion, and after observing one of her low engagement activities – a numeracy lesson – the target chosen for Evie's intervention was 'to engage in the first part of a numeracy lesson'. It was apparent that she could concentration in short bursts only, and that the expectation that, along with her class, she would sit and attend to the one-hour numeracy session was unattainable for Evie. Evie's other needs, mentioned above, were also borne in mind when developing intervention strategies.

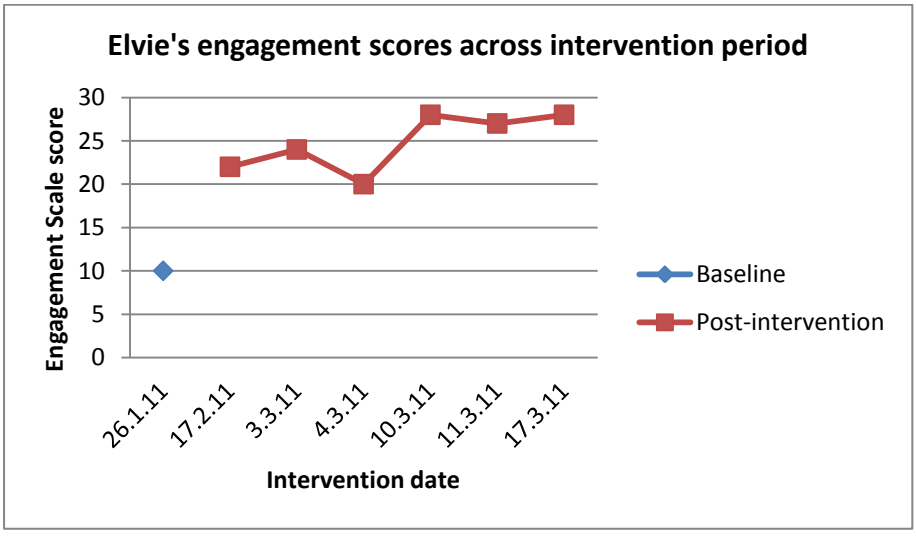
Evie's first numeracy lesson led to a mid-score of '10' on the Engagement Scale (maximum score: 28). Although initially she appeared ready to learn (sitting quietly; correct equipment on her desk; looking focused) Evie quickly disengaged and was largely disengaged throughout the lesson – listening to peers' jokes, playing with equipment on her desk. A job – handing out books to her peers – degenerated into Evie throwing the books at them. The work given was above her ability, although when given one-to-one support and reduced workload, she focused and tried really hard at the numeracy task.

Over the term-long intervention period, a staged series of interventions was put in place for Evie. These included:

- Changing Evie's seat so she was less distracted and had a clear view of the whiteboard
- She was given an easy initial numeracy activity which she enjoyed to focus her attention

- The one-hour numeracy lesson was broken down into manageable time chunks for Evie, each with its own tasks/activities. Evie could sustain engagement in the numeracy lesson for the short time periods, and an activity box was provided for Evie to use during scheduled breaks during the hour's lesson, which were shown on her visual timetable. When Evie had completed the numeracy work agreed, she was able to self-regulate her need for sensory input with a favoured sensory activity, before turning to her next numeracy activity
- 'Reminder' symbols in front of her on table acted as stepped instructions for her task
- A helping hand (made with Evie) was given as a tool to attract attention and to remind her of the appropriate way to do so
- A visual schedule so Evie knew what she was supposed to be doing now and next
- Use of timer, so Evie knew how long she had to spend on her activity box before returning to the maths activity
- A differentiated numeracy sheet so she was not over-faced
- Working with a partner, which gave opportunity for focused social interaction
- Responsibility for jobs to be earned by completion of numeracy tasks
- Reward stickers for using her 'helping hand' to act as motivation.

Evie's engagement scores over intervention period		
Date	Baseline score	Score post-interention
26.1.11	10	
17.2.11		22
3.3.11		24
4.3.11		20
10.3.11		28
11.3.11		27
17.3.11		28



The interventions were successful, and Evie was able to complete focused work during her numeracy lesson, interspersed with specific times for self-regulatory sensory activities (activity box). The class team were considering extending the intervention by reducing the length of Evie's self-regulatory periods, and increasing the time she was engaged in numeracy. From a lesson in which she had had a low level of engagement, Evie was now able to engage for most of the numeracy lesson with the

support of interventions. Following the period of implementation of the Engagement for Learning Resource Framework, Evie's teacher gave feedback about Evie's continuing engagement in learning:

Evie has become more settled in class. She will listen and focus on her work. She does not shout out during a lesson. It has also helped her to develop social skills. Evie has found that she can work with other children and is not so isolated. She rarely shows aggression towards others and her self-esteem has developed.

Making resources for [Evie] was not a big issue, and actually involving [her] in making the resources was a positive thing. The response of the other children was interesting in that they accepted that 'something different' was happening. Strategies used have become an integral part of the lesson. Other children who do not have complex needs but behaviour issues have used some the ideas to improve their engagement.

Gaining insight...into complex learning difficulties and being given tools to develop personalised learning pathways has enabled [Evie] to successfully move forward in [her] learning. A member of the communication and autism team who support the school [one or two visits a term] has been made aware of the research taking place and shown some of the ideas we have used with Evie. They have had copies of some of the resources used with the children and are suggesting their use in other schools!

EARLY YEARS SETTINGS

Both early years settings described the concept of engagement as an approach to effective learning for children with CLDD as valuable using phrases such as 'very interesting', 'spot on', 'central'. However, both also felt that this was an approach that they used already in their setting, as such a philosophy is integral to early years practice. They commented that without engagement there was no learning (1) but that when children were happy and motivated, then they would engage and learn (1).

Both settings said that to have a specific strategy around engaging children was useful. One added that in contrast with earlier work with one child:

> *It encouraged us to use one strategy consistently and follow up from each observation constructively.*

One service commented that the tools validated their approach.

Working with the Engagement for Learning Resources
– *Engagement Profile and Scale*

Rating of usefulness by both settings: 4 *Likert scale 1 ('not at all useful') to 5 ('extremely useful')*

Both settings said that initially they had found working with the engagement profile and scale difficult, but it was useful, and that over time using it had become easier. They now, at the end of the project, described the Engagement Profile and Scale as 'simple to use' (1) and 'clear' (1).

Additional comments, as for the primary and secondary mainstream schools were categorised into:

- Support for educator activities, and
- Outcomes for children

Support for educator activities
Both early years settings felt the tool supported educators in teaching activities, bringing focus (2), giving structure to interventions (1), and enabling children's success (1). One setting stated that the CLDD research project had given them new strategies.

Observation
They valued the specific opportunities to reflect on practice that the research brought. One setting in particular noted the benefits of focused observation:

> *Obviously we observe every activity, but an observation over 20 minutes and reflecting on that is very informative and revealing. Managing to change the behaviour in a structured way from disengaged to engaged is really good.*

The setting also mentioned that observations had drawn out new knowledge about the student.

Assessment
Commenting on the tool's role in assessment, one educator said that the engagement terminology was really useful, giving the staff a language to discuss a child's learning behaviour rather than just saying 'they're doing well'. The other setting also found the indicator words useful as a basis for planning.

Progression
The settings liked the structured approach – looking at one thing at a time in detail, and breaking things down into next actions. One setting stated:

> *You can see that you're actually making progress and that's sometimes hard when you're working with such small steps.*

Professional support
One setting mentioned the benefits of meeting as a team to discuss the research – having the chance to discuss children's needs in a focused way, and also to share engagement practice with staff.

Outcomes for children
Both early years settings identified learning outcomes for their students, and noted variously that over the trial period:

- Support structures put in place had been effective (1)
- An increase in knowledge, skills and understanding (1)
- Child's ability to self-regulate the intervention (1)
- Improved communication skills (1)

Unlike the mainstream primary and secondary schools, the early years settings did not identify any emotional wellbeing outcomes for children during the exit interview.

Working with the Engagement for Learning Resources
– CLDD Briefing Packs

Rating of usefulness by both settings: 4 *Likert scale 1 ('not at all useful') to 5 ('extremely useful')*

Both settings described the packs as useful. One said that the packs had helped them to understand the children's conditions, and the other that, they were well-written, succinct and logical. One setting liked the multiple format of the three sheets at different levels of complexity.

One of the settings had shared the packs with other staff, while the other felt the information within them would be suited to new staff, but would need to be used alongside personal profiles of individual students.

Both settings mentioned difficulties with online access to the CLDD Briefing Packs during the project.

Working with the Engagement for Learning Resources
– *Inquiry Framework for Learning*

Rating of usefulness by setting 1: 3 Rating of usefulness by setting 2: 2 *Likert scale 1 ('not at all useful') to 5 ('extremely useful')*

Both settings described the Inquiry Framework for Learning as useful in part,

Research issues for settings
As for the primary and secondary mainstream schools, the early years settings found that time for completing the Engagement Profile and Scale was a significant factor in implementing the approach. One setting overcame this by sharing the workload with other staff, requesting additional non-contact time, working at home, and prioritising the approach over other work.

They overcame structural difficulties by adapting timetables to accommodate observations (1), and sticking to this regardless (1).

Both settings had human resource issues, one through staff absence. One setting addressed these by: involving another child alongside the one taking part in the research; using a lunchtime supervisor to video interventions; and carrying out observations when the rest of the class were elsewhere.

The settings also mentioned the competing needs of other students (2), student absence and regression over half-term (1), and student mood (1) as issues.

Advice for using the CLDD engagement for learning resource framework
The settings were asked to offer advice for other schools which might become involved in using the resources. It can be summarised as:

- Go for it (1)
- Be aware of time issues (1)
- Discuss as a staff team during the trial period (1)
- Be creative, and keep tweaking activities step by step until they are right (1)
- Recognise that engagement is part of what you already do (1)
- Persist!

Use of the Engagement for Learning Resources in future practice

When asked about the place of the Engagement for Learning Resources in their future practice, both settings said that they thought they would probably use it. However, they said that they would simplify the tools to meet their needs. One setting identified importance of consistency of approach, and the other a need for further training.

Early years case study – SM

SM is a young boy aged 4 years and 3 months who has a diagnosis of autistic spectrum disorder and global developmental delay. His barriers to learning include sensory issues, communication difficulties, social interaction difficulties and feeding/eating issues. SM's home language is Tamil and although he has some situational receptive language in Tamil, he demonstrates no expressive language in either Tamil or English. English is an additional language for him. He receives additional support from a specialist teacher and a speech and language therapist.

SM attends an early years support service for two days a week and a mainstream provision on other days. His support service teacher wanted him to gain some basic communication skills. She stated at the beginning of the CLDD mainstream trial:

> *We've tried using PECS with him to try and encourage communication, but he shows no awareness at the moment of the symbol and will pick it up and throw it.*

SM's teacher felt that he did not understand that in order to get something, he needed to communicate with somebody. Although sometimes he would lead her to the door to go out, generally, he became very upset when he wanted something but could not communicate what it was. The target agreed for the CLDD research project was therefore communication based – for SM 'To communicate a basic want'.

As SM showed awareness of laminated symbols, but was not able to understand them, the teacher and researcher decided to substitute True Object Based Icons (TOBIs) for the symbols. TOBIs are made by mounting a photograph of an object on to corrugated cardboard (or similar), and then cutting out the shape so the resulting TOBI is representative of the object. TOBIs therefore have a tactile as well as a visual dimension for the child.

Finding an effective strategy took trial and error. Three or four weeks into the project, the teacher could not see a way forward with PECS for this child, and said that, had they not been involved in a research project, she would not have persevered. However, a video clip provided by the researcher inspired a slightly different approach leading to progress for the child. The teacher also noticed that SM did not look at the symbol when communication was being prompted, but continued to look at what he wanted. After discussions with the researcher, she found a strategy: *'Something so simple as putting the symbol/TOBI right up in front of his face...[was] really effective.*

Commenting on using the Engagement Profile and Scale, the teacher said:

> *It's quite clear what you are doing, and certainly when you look at the numbers at the end, it's clear. At the beginning, the child was between 2 and 4 [engagement score] and on the last observation he was a 10. You can see that you're actually making progress and that's sometimes hard when you're working with such small steps.*

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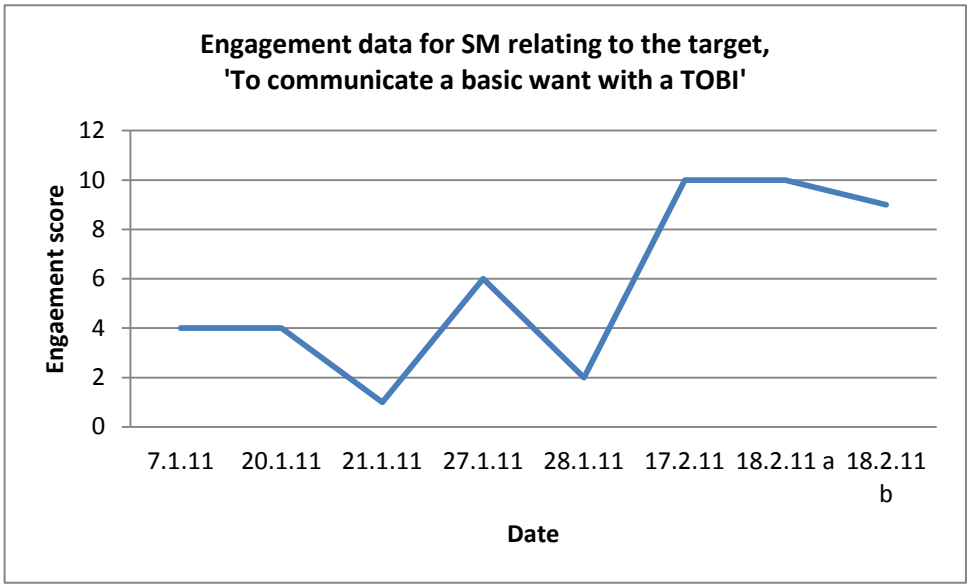

Impact for child

SM's teacher reports that he is beginning to understand the principle of exchange which is foundational to communication – 'He's not quite there, but we've certainly made progress.' She went on:

> *Since we had the light bulb moment where we achieved a level of success with this, I have noticed the child seeking me out more for communication. He will take my hand and lead me to things to show me what he wants. His eye contact has improved. He's obviously associating me with being able to get what he wants by asking.*

MENTAL HEALTH ISSUES WITHIN THE PHASE 1 CLDD RESEARCH COHORT

All young people with learning disabilities have a right to positive mental health and emotional wellbeing.[92] [93] However, while the British Medical Association[94] have reported a rise in the mental health needs of all young people in the UK to two in 10, Emerson and Hatton[95] state that this figure rises to over 1 in 3 (36%) children with a learning disability.

> *They are therefore over six times more likely to have a diagnosable psychiatric disorder than their peers who do not have a learning disability…. They are also significantly more likely to have multiple disorders.*

Many symptoms of mental distress, such as self-harming, frequently occur as a result of frustration. Those with complex difficulties struggle to communicate their unhappiness, which may arise from a variety of environmental, physical or emotional factors, to their families and carers. In the absence of more psychologically orientated treatments, young people are routinely prescribed psychotropic medication, without appropriate in-depth assessment, observation and diagnosis.[96] Even when identified at an early stage as having emotional, behavioural or mental health difficulties, the pathway to appropriate service provision for these young people is fraught with difficulty, with long waiting lists existing for specific assessment and intervention.[97] [98] [99]

The Government reports that having SEN is the greatest predicator of deterioration in the mental health of this group of young people. [100] ASD, for example, is a major risk factor for underlying and co-existing mental health difficulty.[101] Too often we attribute their anxiety to being a core feature of

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[92] Carpenter, B. (2004) 'The mental health needs of young people with profound and multiple learning disabilities', *PMLD-Link,* 16 (1), 9–12.

[93] Foundation for People with Learning Disabilities (2002) *Count Us In: The Report of the Committee of Inquiry into Meeting the Mental Health Needs of Young People with Learning Disabilities*. London: Mental Health Foundation

[94] British Medical Association (2006) *Child and adolescent mental health – a guide for healthcare professionals.* [Online at http://www.bma.org.uk/health_promotion_ethics/child_health/Childadolescentmentalhealth.jsp?page=4; accessed: 4.3.2011]

[95] Emerson, E. and Hatton, C. (2007) *The Mental Health of Children and Adolescents with Learning Disabilities in Britain.* London: Foundation for People with Learning Disabilities/ Lancaster University.

[96] Coughlan, B.J. (2001) Issues in the Prescribing of Psychotropic and Psychoactive Medication for Persons with Learning Disability: Quantitative and Qualitative Perspectives. Unpublished PhD Thesis: University College Cork, Ireland.

[97] Coughlan, B. (2007) 'Mental health difficulties in people with intellectual disability: integrating theory and evidence-based practice'. In: B. Carpenter and J. Egerton (eds) *New Horizons in Special Education: Evidence-based practice in action.* Clent, Worcs: Sunfield Publications.

[98] FPLD, Ibid

[99] Moss, S. (1999) Assessment: Conceptual Issues. In N. Bouras (Ed) Psychiatric and Behavioural Disorders in Developmental Disabilities and Mental Retardation. Cambridge: Cambridge University Press.

[100] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.

[101] Ghaziuddin, M. (2005) Mental Health Aspects of Autism and Asperger Syndrome. London: Jessica Kingsley Publishers.

their ASD, rather than an additional impairment, which needs to be assessed and diagnosed separately. Among young people with PMLD, Rose and colleagues[102] note that often mental health difficulties are overlooked or changes in their behaviour are misinterpreted. They also note the 'co-occurring' nature of mental health needs, a fact which resonated frequently in this study.

Emotional wellbeing/mental health issues within the Phase 1 cohort

While not an explicit strand of research activity, the CLDD team was concerned to know the impact of emotional wellbeing and mental health on the learning of the students involved in the research. In Phase 1 of the project, baseline information about the 59[103] participating students was summarised from children's files and interviews carried out with educators, families and therapists. During the interviews with educators, they were asked to comment upon the student's physical health and emotional wellbeing/mental health.

The responses, together with documentary information from student files, allowed the CLDD team to gain an overview of educators' concerns about the emotional wellbeing/mental health (EWB/MH) within the participating student group. The students could be categorised into four groups:

- Students with mental health issues who received support from mental health professionals (e.g. CAMHS, the educational psychologist or a counsellor)
- Students with mental health issues who did not receive support from a mental health professional, but whose behaviours caused concern to educators and were attributed to mental health issues
- Students whose behaviours caused educators concerns about their emotional wellbeing
- Students whose mental health caused educators no concern.

It should be remembered that the student participants were a purposive sample, and therefore the information cannot be extrapolated to a wider population of students with CLDD. However, the trends within this student participant group may be reflected more widely.

Summary of within-participant group mental health findings

Of a total of 59 students (male = 43; female = 16) in the student cohort, there was mental health information for 51. Educators indicated concerns about emotional wellbeing/mental health for 28 of the 51 students. Twenty-three students did not cause concerns about their EWB/MH.

The total number of students and the number of students about whom there were emotional wellbeing/mental health concerns can be compared by age (primary & below/secondary) and gender (see below).

[102] Rose, R., Howley, M., Fergusson, A. and Jament, J. (2009) 'Mental health and special educational needs: exploring a complex relationship', *British Journal of Special Education,* 36 (1), 3–8.
[103] One student was no longer able to participate in the research.

Comparison of EWB/MH concerns by age and gender

TOTAL GROUP (n=51)	**Primary & below**	**Secondary**
Male	14	23
Female	3	11

EWB/MH ISSUES (n=28)	**Primary & below**	**Secondary**
Male	8	15
Female	1	4

The 28 students who caused educators EWB/MH-related concern were categorised into the three remaining groups:

- There were nine students who had an identified EWB/MH concern and who were seeing a mental health professional (clinical psychologist (3), psychotherapist (2), CAMHS professional (2); counsellor (2)). Of these, all but two (a primary aged male and a secondary aged female student) were secondary aged male students.
- There were six students about whom there were serious mental health concerns, but who were not seeing a mental health professional. All were male – two of primary, and four of secondary age.
- Educators were concerned about nine further students whose EWB difficulties were affecting their ability to learn and were not being adequately addressed. These concerns included: depressed mood for 50% or more of the time; excessive sleeping (most of the school day); very low self-esteem; a possible victim of rape.

With students with complex learning disabilities, it is difficult to differentiate between EWB/MH issues which are associated with their conditions, and those which are not.[104] Nonetheless, within the Phase 1 cohort of students with CLDD, over half were causing concern due to EWB/MH.

These concerns – identified by educators and from student documents (e.g. reports associated with Statements of Special Educational Need) – were categorised into the following areas (adapted from SNASA[105] and HoNOSCA[106]). It should be remembered that this list was not compiled as part of a systematic investigation into the EWB/MH difficulties within the participant student group, and therefore there may be relevant conditions which were not mentioned in relation to individual students. However, it does give an indication of educators' main concerns across this participant group. The number of students identified as having an issue is represented by the bracketed number.

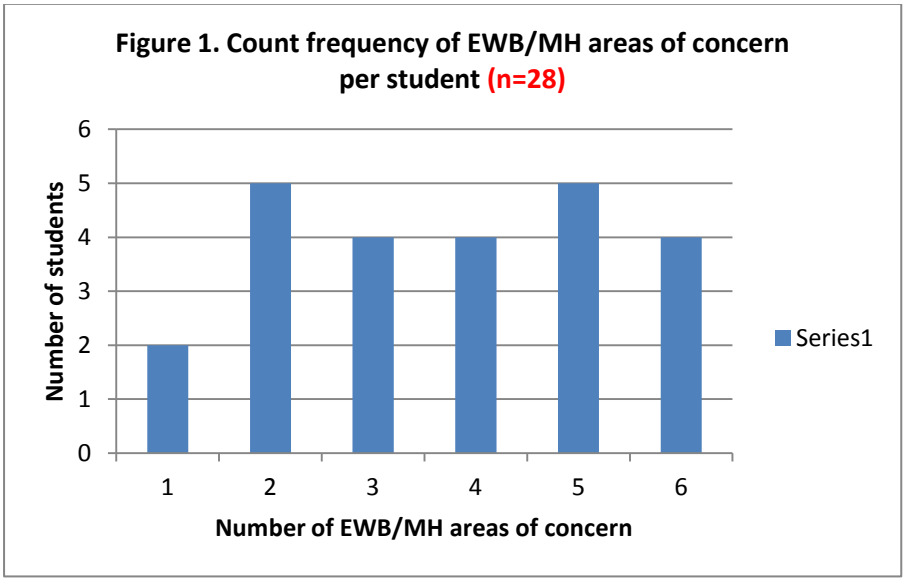
[104] Fergusson, A., Howley, M. and Rose, R. (2008) 'Responding to the mental health needs of young people with profound and multiple learning disabilities and autistic spectrum disorders: issues and challenges', *Mental Health and Learning Disabilities Research and Practice,* 5, 240–251.

[105] Kroll, L.,Woodham, A., Rothwell, J., *et al.* (1999) Reliability of the Salford Needs Assessment Schedule for Adolescents. *Psychological Medicine*, 29, 891– 902.

[106] Gowers, S. G., Harrington, R. C., Whitton, A., Lelliott, P., Beevor, A., Wing, J. and Jezzard, R. (1999) Brief scale for measuring the outcomes of emotional and behavioural disorders in children: Health of the Nation Outcome Scales for children and Adolescents. *The British Journal of Psychiatry,* 174, 413–416.

Aggression (13)
Social relationship issues (11)
Sleep issues (8)
Family issues (7)
Anxiety (6)
Deliberate self-harm (6)
Depressed mood (5)
Anger (4)
Hallucinations / delusions / bizarre behaviour (4)
Hyperactivity / attention issues (3)
Oppositional / disruptive (3)
Sexualised language and behaviour (3)
Self-esteem issues (3)
Over-dependency (2)
Cultural/racial difficulties (1)
Drug or alcohol misuse (1)
Eating disorder (1)
Obsessive compulsive symptoms (1)
School attendance issues (1)

Each student had between one and six EWB/MH areas associated with them, and the count frequency per student is represented by the graph below.



Mental health in trial school students

While specific information about students' mental health was not collected during the trial school phase, as CLDD research assistants were not working directly with the students, anecdotally students' mental health issues concerned schools. One mainstream school said during their exit interview that mental health issues together with ADHD and autism were the three main student difficulties in their school. There was indication that where mental health issues existed these needed to be addressed prior to focusing on the students' engagement in learning. A development school observed:

> *With M there are medical and mental health issues that need dealing with... It's not about how to motivate him; it is medical issue that needs to be dealt with.*

Case study

Stephen is 11 years old and currently attends a mainstream secondary school. Stephen transitioned from primary school with a statement to support his learning needs due to complications with speech and language communication and behavioural, emotional social development needs. His parents are currently pursing referral routes to investigate the possibility that he falls within the Autistic Spectrum.

Stephen became involved in the CLDD research project due to his behavioural outbursts and difficulties in engaging within the curriculum. He is currently working below age-related norms at National Curriculum Level 3a for maths and 2b for literacy, but the support he is provided with allows for appropriate educational strategies to be put into place. His behavioural outbursts can, however, make this learning support hard to put into place.

There is a growing concern for Stephen's emotional wellbeing as he becomes less motivated by learning and interacting within his environment. These concerns are heightened by verbal outbursts from Stephen, including suicide threats and comments about his own mental state. Stephen also engages in self injurious behaviours including scratching his arms and legs. The difficulties his mental health poses are becoming increasingly hard to manage within this inclusive setting

The school are working with Child and Adolescent Mental Health Services (CAMHS) together with Speech and Language Therapists to investigate Stephen's issues and appropriately support him. The school are also implementing strategies which have been shown to benefit children's mental health – increasing the amount of exercise he can access, involving him in peer mentoring, and allowing him time with trained staff to allow him to discuss his difficulties.

It is hoped that addressing Stephen's mental health issues with CAMHS in collaboration the SALT will enable him to focus on learning once again. This will allow the school to use the engagement profile scale and profile so appropriate strategies can be put into place to reengage Stephen in school life and reduce his vulnerability to mental health issues in the future.

CLDD research project response

Through the baseline data collected in Phase 1 summarised above, and subsequent informal discussions with colleagues in trial schools, the CLDD Research Project team have become aware of the under diagnosis of students whose CLDDs include mental health issues and of the difficulties experienced by educators in addressing mental health issues through the lack of specialist EWB/MH support in schools for all but the most severely affected young people. Young people's EWB/MH needs have to be addressed before these young people can engage as effective learners.

As part of the research project, the CLDD project team wrote the *Mental Health and Emotional Wellbeing* booklet within the Complex Needs series of six booklets which sets out the context for schools of educating students with CLDD in the 21st Century.[107] This response was shared with all participating research schools. There is also a Mental Health and Emotional Wellbeing Briefing Pack

[107] Carpenter, B., Coughlan, B. and Fotheringham, J. (2010) *Mental Health and Emotional Wellbeing (Complex needs series).* London: SSAT.

available from the project website (see below) to provide information to educators who are supporting students with needs in this area.

RECOMMENDATION 7

Mental Health is the most pervasive and co-occurring need to compound and complicate children's special educational needs and disabilities. In recognition of this, the project has developed supporting information for schools. We recommend that schools consider creating a 'Wellbeing Team' to promote emotional wellbeing in all children and young people and build emotional resilience in those with Complex Learning Difficulties and Disabilities.

TRAINING THE SEN WORKFORCE

Children with CLDD are a unique group of learners with a distinctive profile of learning need. We need to equip teaching professionals to offer high quality education to these children so that they do not become alienated by inappropriate teaching ill-matched to those learning needs.

In the UK, Salt and Lamb[108] have highlighted the shortage of teachers effectively trained in SEN, and the paucity of training routes open to those who wish to follow that career pathway. This is felt across the school system, both in mainstream and special education. Hartley[109] [110] has observed the 'lack of core or basic understanding of SEN amongst the teaching workforce'. However, the situation also is an international one. Jones and West[111] in a comparative piece based on data from the USA and UK report:

> *It is well established that a critical shortage of qualified special education teachers exists …. The shortage...has existed for at least 15 years, and the need for new special educators is expected to grow at a rapid pace.*

The Government have recognised that children with CLDD require complex support and provision from educators and organisations who have the necessary skills – 'lack of the right help…can significantly affect [these young people's] quality of life,' and they are taking steps to create a workforce that is 'well trained and confident to identify and overcome a range of barriers to learning…and intervene early when problems emerge.' [112] Establishing pathfinder Training Schools represents a significant step towards meeting this goal.

The necessity of effective initial and continuing professional development is articulated by one of the teachers interviewed for the Salt Review:[113]

> *Ongoing CPD is vital, partly because the landscape is always changing. It also makes you feel like you are 'valid'; it freshens you up, stops you being complacent, and opens you up to new ideas.*

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[108] Department for Children, Schools and Families (2010) Salt Review: Independent review of teacher supply for pupils with severe, profound and multiple learning difficulties (SLD and PMLD). Annesley: DCSF Publications; Department for Children, Schools and Families Department (2009) Lamb Inquiry: Special educational needs and parental confidence. Annesley: DCSF Publications.
[109] Hartley, R. (2010) *Teacher Expertise for Special Educational Needs: Filling in the gaps* (Research note: July). London: Policy Exchange.
[110] Hartley, R. (2010) *Special Educational Needs: Reforming provision in English schools*. London: Policy Exchange.
[111] Jones, P. and West, E. (2009) 'Reflections upon teacher education in severe difficulties in the USA: shared concerns about quantity and quality', *British Journal of Special Education*, 36 (2), 69–75.
[112] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability.* Norwich: The Stationery Office.
[113] DCSF (2010), Ibid.

In response to the shortage of trained staff with SEN expertise, many schools have established training hubs, and developed their own means of fostering targeted expertise among their existing staff, both qualified and unqualified. New Bridge School[114] is one example of this:

> *At New Bridge, we recognise that effective, high quality and individualised staff development is vital to meeting the school's professional development agenda, realising future goals and ambitions, and contributing to the development of a responsive and supportive staff. Our flexible training routes information planner (TRIP) allows for three fixed training days each year to cover all compulsory training elements for all staff, and 10–15 flexible training hours for staff to personalise their own development. TRIP has supported colleagues into qualified teacher status from the initial positions of classroom support assistants and higher level teaching assistants. This 'grow your own' model not only offers colleagues the opportunities to develop their skills, but makes economic sense for the school and is less risky than using more traditional employment routes.*

In regenerating the knowledge, skills and understanding of educators around SEN, there is also a time implication. Collaborative work between the University of Northampton, local authorities and schools has demonstrated that even the most experienced teachers from mainstream and local authority advisory/support services need a high level of support and specific professional development to enable them to work effectively with children with CLDD. One school leader, who builds this into the school plan year on year, commented that in reality it may take two years for a teacher who is new to this field to become competent in delivering appropriate teaching and learning.

As Quinn and Righini[115] state:

> *With ever increasing pressures on school budgets it is becoming more and more necessary to implement innovative ways of working that can meet the needs of our 21st century school whilst achieving best value with the funding that we do receive for students and families.*

The Teaching Schools initiative, recently announced by the Government, will go some way towards offering responsive, school-based training. In so doing, we need to 'share the expertise and talents that we already have – in our schools, our families, our local authorities, local universities and beyond – through:

- Valuing and investing in our workforce – capitalizing on their strengths
- Reviewing and reflecting on practice – either our own or a more experienced colleague's
- Joint teaching with shared reflection
- Peer mentoring or critical friendship using coaching and mentoring principles
- Networking
- Developing working partnerships.[116]

[114] Fergusson, A. and Carpenter, B. (2010) *Professional Learning and Building a Wider Workforce.* London: SSAT.
[115] Fergusson and Carpenter (2010) Ibid.
[116] Fergusson and Carpenter (2010) Ibid.

The CLDD research project

The Government have identified the importance of enskilling educators of children with the most complex needs, and acknowledged the experience and knowledge that outstanding special schools will bring to the Teaching School network. Schools across all three phases of the CLDD research project have acknowledged the impact of research across their schools, and the benefits it has had for their educators, as well as their students. As one school stated, 'The quality of what is being delivered to the children has gone up.'

From the outset of the project, it became clear that students with CLDD were challenging even the most skilled educators, and that educators did not have the tools in their teaching toolkit to meet the needs of this diverse and rapidly changing group of students. Many were attempting to resolve curriculum and pedagogical issues based on a framework evolved in the late 20th century, and which did not incorporate the new needs profile of those children with CLDD. For example, their approaches were not cognisant of the contribution of neuroscience which has so rapidly progressed in the early 21st century, and which has given rich insight into the brain functioning, and hence learning patterns, of children with CLDD.

This project evolved an inquiry-based approach to formulating personalised learning pathways for students with CLDD. As such, this required educators to investigate, explore and discover how needs that were previously outside of their professional experience could be identified and met.

School-based research as professional development

While the schools involved in the research commented during the CLDD research project exit interviews on personal professional development experienced by those involved, some also referred to its value as an alternative form of CPD. The CLDD Engagement for Learning Resource Framework appeared to create a dynamic of professional development. Three schools suggested that it was, in itself, CPD, and two others mentioned its role in coaching staff. Others mentioned the resources as a means of supporting educator induction (CLDD Briefing Packs) and as a coaching/mentoring tool (Engagement Profile and Scale/Inquiry Framework for Learning).

The benefits described by educators for their professional development as a result of implementing the CLDD Engagement for Learning resources have been noted in detail in an earlier section ('Outcomes for students and educators'; see p. 43), but to summarise, educators noted professional benefits in areas of both ethos – 'Thinking and reflecting', 'Professional focus', 'Awareness of the student with CLDD as a learner', 'Understanding' – and in practice – 'Personalising learning', 'Planning, target-setting and assessment', 'Observing students'. An overview is given in the table below:

Professional learning outcomes noted by educators involved in the CLDD research project

	CLDD research project phases (n=numbers of schools)[1]			
	Phase 1 SEN development schools *(n=12)*	**Phase 2 SEN UK trial schools** *(n=50)*	**Phase 2 SEN international trial schools** *(n=15)*	**Phase 3 Mainstream trial schools** *(n=12)*
Professional benefits (ethos)	8 (**67%**)	42 (**84%**)	12 (**80%**)	12 (**100%**)
Professional benefits (practice)	9 (**75%**)	40 (**80%**)	15 (**100%**)	11 (**92%**)
	Both early years settings noted practice benefits of involvement in the CLDD research project; neither setting mentioned ethos benefits.			
	[1] The term 'school' associated with data refers to the professionals involved in the CLDD research project within a school			

Schools valued the research dimension of the project. One Headteacher stated that developing and implementing the CLDD Engagement for Learning resources had been:

> *A fantastic project...A good reminder that we must always be seeking yet more innovative approaches and keeping up to date with research to improve teaching and learning opportunities… it has led to some excellent new ideas/resources that will impact positively on pupils and on teacher development.*

Another educator described the CLDD Engagement for Learning approach as:

> *Good for research by people with a wide range of research skills/prior knowledge… This will allow…stakeholders to feel empowered therefore helping to develop a school's research culture across a wide range of people.*

As the Government has noted, Ofsted research has shown that the most effective way for educators to learn is from each other. [117] [118] The research model adopted by the CLDD research project during the development phase involved research advisors and assistants with CLDD education and/or psychology expertise working alongside educators in schools. One teacher commented:

> *[The research assistant] used her experiences to coach me so I could come to a positive outcome for the pupil I was working with. Her skills and expertise enabled her to guide me through some difficult times. At the time, I didn't even realise I was being coached, but now when I look back, it has had such a positive impact on me and my class. As a school, we are now looking at coaching throughout.*

[117] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.
[118] Ofsted (2010) *The Special Educational Needs and Disability Review: A Statement is not enough.* London: Ofsted.

Impact across the range of educators

There were a range of education professionals who took the CLDD research project's 'lead practitioner researcher' role in the collaborating schools during the project, and others in these schools which were also involved in the project.

Numbers of different educational professionals taking the lead practitioner researcher role in the CLDD research project

	SEN development schools (n=12)	**UK SEN trial schools** (n=50)	**International SEN trial schools** (n=15)	**Mainstream trial schools** (n=12)	**Early years trial settings** (n=2)
Headteacher	1		1		
Deputy headteacher	4	8	4	1	
Assistant headteacher	1	8			
SENCO				3	
Class/subject teacher/equivalent	5	33	9	5	2 (+2 shared role)
Teaching assistant		1		3 (+2 shared role)	
Therapist	1 (SALT)	1 (SALT)	1 (Music)		

Schools reported professional development outcomes from teaching assistants to therapists (see 'Outcomes for students and educators' section (p. 43) and 'The role of teaching assistants' (p. 139)). This suggests that research in schools could also be a way of meeting training needs at different educator levels.

Training in implementing the CLDD Engagement for Learning Resource Framework

While educators identified the CPD benefits of involvement in the CLDD research project, developing and implementing the Engagement for Learning resources also had implications for training in both research and engagement ethos and practice.

At all phases of the project, all schools (apart from the Australian schools for logistical reasons) involved in the CLDD research project were invited to take part in at least one induction/training day, and a research feedback day. The development schools received more intensive training, taking part in one research training day, a two-day project induction and one further project training day, as well as a feedback day.

When talking about the future use of the CLDD Engagement for Learning resources, schools perceived that training was needed in order to implement them more widely. For example, among the UK SEN trial schools, 15 (31%) schools perceived an additional training implication associated with the tools – nine noting the need for training, and six saying that they had or would be developing training around the CLDD Engagement for Learning Resources for their staff.

This further training need was apparent in some of the project outcomes. One of the issues which was not logged systematically through the exit interviews was lead practitioner researcher misunderstandings around:

- The concept of engagement
- How the CLDD Engagement for Learning Resources related to engagement
- How the two integral elements of the Engagement Profile and Scale were related to one another.

Such misunderstandings, which often became apparent only at exit interview, indicate a need for further training, especially as these issues are fundamental to the approach, and gaining meaningful outcomes for students and staff.

Further developments in CLDD Engagement for Learning training

While the CLDD Engagement for Learning Resource Framework was seen as having an implication for training – whether carried out by schools for staff who were not originally involved in the project or schools requiring further training – it was also seen as a training resource. Following school-wide roll out of the CLDD Engagement for Learning Resource Framework by Springhead school, one of the UK trial schools, discussions with their local authority led to plans to roll out the CLDD framework county-wide in North Yorkshire. The initial implementation has been completed with the first tranche of schools having received training and mentoring. (See following case study

In New Zealand, following the international trial of the CLDD resource framework, six further special schools have self-funded their involvement in an NZ phase of the CLDD research project.

In the light of the lack of training, the emergence of new and distinctive professional learning needs and the current move towards school-based teacher training, a new model of teacher education needs to evolve that can address the new generation of children with CLDD. Analysis of trends and educator commentary would lead us to recommend a model of training built on four plinths. They are: practice-led, evidence-based, inquiry-focused, research-informed. These need to operate interactively, each informing the other, enabling teachers and teaching assistants to engage in dynamic professional learning that is constantly grounded in the reality of the student with CLDD and their unique learning profile. New generation children require new generation pedagogy; their educators require new generation professional learning.

RECOMMENDATION 8

In line with the recommendations of the Salt Review and the Lamb Inquiry, recommendations for better training for teachers of children with SEND, the findings of this project also support this, and illustrate the urgent need in relation to a new generation of children. We recommend that the new modules of training in special educational needs and disabilities, and specifically Complex Learning Difficulties and Disabilities, commissioned by the Training and Development Agency for Schools, are systematically introduced across schools.

Implementing the Engagement for Learning Resource Framework

North Yorkshire Local Authority – a case study

North Yorkshire Local Authority has recently completed the first phase of piloting the CLDD Engagement for Learning Resource Framework within their schools.

Springhead School, a community special school in Scarborough, participated in the Phase 2(a) SEN trial phase for the CLDD research project. The assistant headteacher described their reasons for taking part:

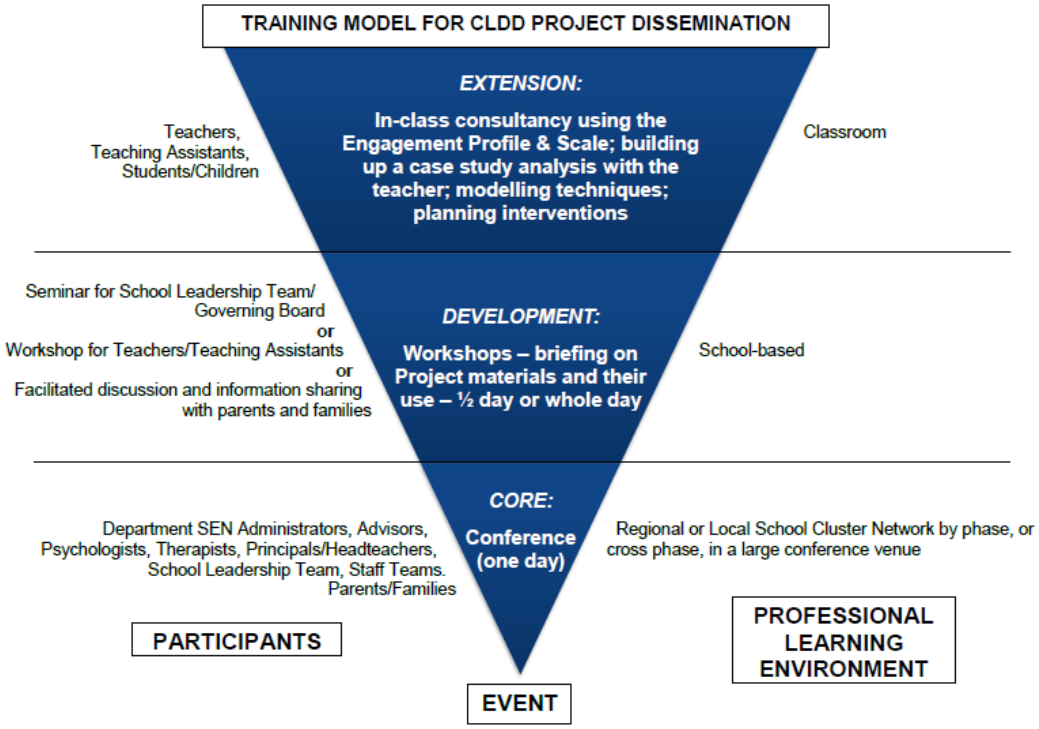
> *We wanted our school to be part of the CLDD research project because we recognised that there were some students who always made us ask, 'What else can we do?', 'What can we do to motivate them?', 'How can we tap into their abilities?'. We also wanted to be able to offer a way to empower the staff. We don't have all of the answers, but through the CLDD research project we now have a tool that can help us to work out some of the answers.*

When the assistant headteacher first saw the resources, she thought there was nothing new about the CLDD Engagement for Learning approach, but, she continues:

> *How wrong was I?! I can honestly say it has inspired me and changed my way of thinking about teaching and learning – it has given a very practical approach with our most complex pupils and has helped with empowering staff. It has given us a way to go forward with our questions and thoughts that we did not have before.*
>
> *The whole notion of observing someone at their most engaged immediately starts the process with positives. Then framing the observations and what we know about the child into a very positive Engagement Profile – which immediately focuses on how the child engages in their learning, not on their challenging behaviour (if indeed they have any!) – is refreshing and immediately feels empowering for the staff.*

Discussions between the school and North Yorkshire Local Authority led to the local authority's commitment, following discussions between Professor Barry Carpenter and Christine Steadman, to manage a staged roll out of the CLDD Engagement for Learning Resource Framework beginning with a pilot of six schools.

The dissemination was based on the training model below (Carpenter, 2010):



The 'From conference to classroom' training model for CLDD project dissemination (Carpenter, 2010)

Following a conference in April 2011, North Yorkshire special schools were invited to apply to become one of six pilot schools. Two North Yorkshire assistant headteachers and a CLDD project research assistant supported the pilot schools in using the resources and collecting data through two face-to-face visits supplemented by telephone and email contact.

North Yorkshire Local Authority have now completed the first phase of rolling out the CLDD Engagement for Learning Resource Framework. The feedback from all the schools involved was positive. They felt that the Engagement Profile and Scale was a tremendous tool and, supported by the Inquiry Framework for Learning, it gave them a new perspective on personalisation. All the schools plan to continue using the resources; some will embed them in their management structures, and others are considering a new form of lesson observation to include a measure of student engagement. One school has actively involved parents and has trained them in using the profile.

THE ROLE OF TEACHING ASSISTANTS

> *I believe the role of the TA is one of support, guidance and understanding, and this increases in the engagement process as the TA gains an understanding of the importance of the engagement process to the lives of SEN children. When this is recognised and applied to what can feel like a stressful, disorganised and frustrating school day, children's emotions, learning and attitude is transformed.* (Mainstream trial school)

Teaching assistants (TAs)[119] are beginning to make a significant and growing contributions to leadership and learning in schools. Although many boroughs and authorities require TAs to have or be working towards a minimum level of qualification, TAs are not required to have education-related qualifications. The development of the higher level teaching assistant (HLTA) has offered leadership by TAs for TAs. The HLTA is trained against a set of national standards, and the leadership of fellow TAs is part of that remit.

In both mainstream and special schools, the TA role is vital to ensuring that a high quality differentiated curriculum is offered to students with learning difficulties. Innovation and creativity around and within the TA role will ensure that personalised learning, which truly meets individual needs, takes place for students with learning difficulties. However, the Government have stated 'to have a positive impact [teaching assistants] need to be trained, supported, deployed and managed effectively', and 'teaching assistant time should never be a substitute for teaching from a qualified teacher'. [120]

There are differing accounts of the impact of TA support for students in classrooms. Blatchford et al.[121] found that it helped to reduce teachers' stress levels and facilitated class management by providing a more individual approach for the student who may be more challenging, but had little impact on the student's learning. Conversely, the National Teacher Research Panel (NTRP)[122] reported that TAs were deployed in a variety of ways but found that they played a central role in providing detailed feedback to teachers regarding

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[119] Also learning support assistants, special support assistants, learning facilitators or education assistants

[120] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs – a consultation.* London: Department for Education.

[121] Blatchford, P., Bassett, P., Brown, P., Koutsoubou, M., Martin, P., Russell, A. & Webster, R. with Rubie-Davies, C. (2009) *Deployment and Impact of Support Staff in Schools: The impact of support staff in schools. Results from strand 2, wave 2.* DCSF Research Report DCSFRR148. London: Institute of Education, University of London.
[Online at: http://education.gov.uk/publications/eOrderingDownload/DCSF-RR148.pdf; accessed: 27.7.11]

[122] National Teacher Research Panel (2006) *The Active Engagement of Teaching Assistants in Teaching and Learning.* London: NTRP. [Online at: http://media.education.gov.uk/assets/files/pdf/t/thorntonandhedges.pdf; accessed: 27.7.11]

the students progress, and in developing and providing strategies for classroom management.

Working with students with learning difficulties on a one-to-one basis requires specialist knowledge to support the student's learning and the educator's delivery of a personalised curriculum. Hartley[123] writes:

> *TAs often perform very different roles not only according to the type of school, but according to the type of need of the pupils they are working with.*

Since the move towards inclusive education, many of these students are entering mainstream schools, inevitably leading to a rise in the number of TAs employed, and issues of how to manage the TA workforce effectively. The Salt Review[124] observes that in mainstream schools:

> *The Teaching Assistant will typically be expected to lead the child through their learning, ideally guided by the class teacher.*

He notes that 'there is significant evidence to suggest that TAs (both in the special sector and in the mainstream) are severely undertrained' and suggests that TAs need 'a better and more
consistent [career] framework' than the current HTLA training, together with funding for continuing professional development. He also supports the Lamb Inquiry's[125] call for a 'long overdue' review of best practice in the use of TAs.

There is an increasing emphasis on enskilling the TA workforce, with some schools employing specialist teaching assistants :

Case study: specialist teaching assistants[126]

Barrs Court School in Hereford trains specialist teaching assistants to support the work of professionals from different disciplines across the school. Each teaching assistant works closely with an associated professional – speech and language therapist, occupational therapist, sensory integration specialist or post-school transitions professional. They support students during withdrawal sessions, act as an information conduit between the class teacher and specialist professional, and support ongoing therapeutic input for the student

[123] Hartley, R. (2010) Teacher Expertise for Special Educational Needs: Filling in the gaps (Research note: July). London: Policy Exchange.
[124] Department for Children, Schools and Families (2010) *Salt Review: Independent review of teacher supply for pupils with severe, profound and multiple learning difficulties (SLD and PMLD)*. Annesley: DCSF Publications.
[125] Department for Children, Schools and Families (2009) *Lamb Inquiry: Special educational Needs and parental confidence*. Annesley: DCSF Publications.
[126] Fergusson, A. and Carpenter, B. (2010) *Professional Learning and Building a Wider Workforce (Complex needs series).* London: SSAT.

through class-based, small group or withdrawal sessions. In addition to their classroom role, the specialist teaching assistants also have a tutoring role in the school's mandatory, two-year training course for teaching assistants. This has been a significant benefit to the school, and the headteacher, Richard Aird, has now changed the job title of the specialist teaching assistants to 'training instructor' to reflect their workforce training responsibilities. He has also arranged access for the postholders to a Certificate in Education qualification in adult education, in addition to disability related qualifications such as PECs Tutor.

There is also a growing emphasis on supporting TAs to become teachers. The Salt Review[127] identifies them as a 'rich potential source of teachers'. New Bridge School, Oldham[128] corroborates this:

Case study – New Bridge School, Oldham

New Bridge School, Oldham, is an extended community school, open seven days per week, 48 weeks per year. Our 180 staff support a 300-place school on a mainstream site for students aged 11–16 years with SEND, and a 16–19 learning centre two miles away… At New Bridge, we recognise that effective, high quality and individualised staff development is vital to meeting the school's professional development agenda, realising future goals and ambitions, and contributing to the development of a responsive and supportive staff. Our flexible training routes information planner (TRIP)… has supported colleagues into qualified teacher status from the initial positions of classroom support assistants and higher level teaching assistants. This "grow your own" model not only offers colleagues the opportunities to develop their skills, but makes economic sense for the school and is less risky than using more traditional employment routes.' (p. 3)

Teaching assistants in the CLDD research project

During the semi-structured exit interviews carried out during each of the three phases of the CLDD research project, the participation and impact of teaching assistants on the project was raised by a number of schools, and the resulting data collated as part of a categorical content analysis. The overview below presents the issues raised by these schools.

Development schools

Only two development schools mentioned the role of TAs within the project. They observed that as the research progressed, TAs had started to take a more proactive role in the classroom, one adding that it empowered the TAs and gave them more autonomy, and the other that TA involvement had been a success.

> *I think it was really useful for support staff – they felt they were getting into the nitty gritty. [Their] evaluations used to be 'Ellie read a book and she enjoyed it'. [Using the*

[127] Department for Children, Schools and Families (2010) *Salt Review: Independent review of teacher supply for pupils with severe, profound and multiple learning difficulties (SLD and PMLD)*. Annesley: DCSF Publications.
[128] Fergusson, A. and Carpenter, B. (2010) *Professional Learning and Building a Wider Workforce (Complex needs series).* London: SSAT.

Engagement Profile and Scale], they started thinking about think of next ideas and how they could move [students] on. They're thinking more strategically and more personalised.

UK SEN trial schools

Twenty-two schools within the UK SEN trial phase discussed the role of TAs within the project during their exit interview. All 22 said that they thought that TAs could have a future role in working with the CLDD Engagement for Learning Resource Framework. There was a wide range of understanding of the TA role between schools. Some schools described TAs as integral members of the staff team:

> *We all do exactly the same such as formulating individual plans – TAs give opinions to teachers for these plans. We do work as a team. TAs know what works and what doesn't. At times, they have new ideas. Our management is very forward thinking, and therefore encourages TAs to develop.* (UK SEN trial school)

Others saw the teacher and TA roles as separate:

> *For TAs [the focus] is mostly about engagement – as teachers are too busy thinking about challenging behaviours and not about personality – and thinking about personalisation…. Teachers are so stressed and too busy to look at the engagement level.* (UK SEN trial school)

Five schools stated that the TAs' role was key. Some schools added that TA involvement should be as part of a class team (5), and that teachers should lead this (4), although two further schools commented that they would like TAs to have the responsibility to lead on scales. One suggested a specific engagement specialist role could be created for a TA.

> *I feel there is absolutely a role for TAs in using the tools. Ideally, they would be doing the bulk of the work, but this again needs management. It needs to be a whole class approach – there is no point just one person holding this knowledge.* (UK SEN trial school)

Three schools commented that, during the CLDD research project, working with the Engagement Profile and Scales had:

- Allowed TAs to take a more creative role (1)
- Made TAs more focused (1)
- Helped teachers to work with TAs (1).

Schools saw various advantages in involving TAs:

- That they could be more involved in lessons and spread knowledge (1)
- They had greater knowledge of individual students' engagement than teachers (2)
- Would feel valued (1).

One noted that time would have to be allocated to the TA for involvement, and another that HLTAs would need training.

There were also specific suggestions about implementing such a structure:

- TAs would need to know the pupil really well (2)
- TAs should have a specific time each week to work on implementation (1)
- The teacher would need to be fully supportive (1)
- The teacher would need to identify the targets and activity (1).

International SEN trial schools

Similar ideas were raised by the international trial schools. Seven schools saw a role for the TAs in using the CLDD Engagement for Learning Resource Framework, and one stated that their involvement was key. Two schools thought that teachers would need to manage and guide TA involvement, and a further three that TAs would need specific training.

Two expressed concern that TAs would be overfaced by all seven indicators in the Engagement Profile and Scale, and suggested that they might focus on one area. Two schools – one in the USA and another in Australia said that their TAs were not involved in supporting teaching, but employed in a personal care capacity. This perception of TAs in a caring capacity rather than supporting learning is reflected in the following quote:

> *Teacher aides can make valuable contributions in the engagement approach – their thoughts, ideas and reflections. However, it is vital that they have a desire to foster a culture of learning, rather than see themselves primarily as caregivers.*

Mainstream schools

Of the 12 schools taking part in the CLDD research project, there were five TAs with major roles in the research. Seven schools mentioned or implied that TAs would have an involvement in using the CLDD resources, one adding that they thought this would enable TAs to think more analytically. Three schools mentioned the involvement of TAs in the research project. Two schools said that involving TAs in the project had helped logistically. One school was planning to train their TAs in the approach. Another school commented that

teachers needed to show and explain to TAs the effect that using the tools had on student engagement, so they knew why they were using them.

TA experiences during the CLDD research project

There were no TA lead practitioner researchers among the development schools; there was one TA who was the lead practitioner researcher among the UK SEN trial schools, and none internationally; there were five TAs among the project leads in the mainstream trial.

Issues and outcomes that were identified among the TAs were:

- Increase in skills and knowledge
- Time pressure due to duties within own classroom
- Lack of support within the school
- Lack of ability to directly influence teachers to take on tools.

> *As a TA, I can't change mainstream schools' practices, but I can enlighten, encourage and support the class teacher(s) to focus on re-engagement of disengaged children...*

In terms of what TAs gained from involvement in implementing the Engagement for Learning Resources, one described it as professional development:

> *When I first started to work with [the student], I was stressed and lacked knowledge and training. Since I received the resources, I can use these tools to work with other children as well, following the same steps as I did to support [the first student]. I'm not stressed any more. I feel empowered. I feel proud... Sometimes school can't get you out to do training. This covers that problem*.

Training

Across all phases, five schools schools mentioned the need for training of TAs in using the Engagement for Learning Resource Framework tools. Some schools were proactive:

> *We've identified key members of staff to train up... We want a TA in every class in the long run.*

Time issues in implementation

In the mainstream phase, schools were asked specifically what the issues around the project were and how they had managed them. Eleven out of 12 schools mentioned an issue with time. Of these, none mentioned deploying TAs as part of the solution. Seven schools spoke about human resources related issues, and three of these mentioned deploying TAs as part of the solution to their HR-related difficulties.

Useful resources / links:
TDA website for information on the role of support staff, CPD and training (http://www.tda.gov.uk/support)

RECOMMENDATION 9

The diversity of need profiled in Complex Learning Difficulties and Disabilities should be reflected in the diversity of the workforce in schools which support children and young people with Complex Learning Difficulties and Disabilities. We recommend a re-designation of Teaching Assistant posts and others to build an appropriate wider workforce.

RECOMMENDATION 10

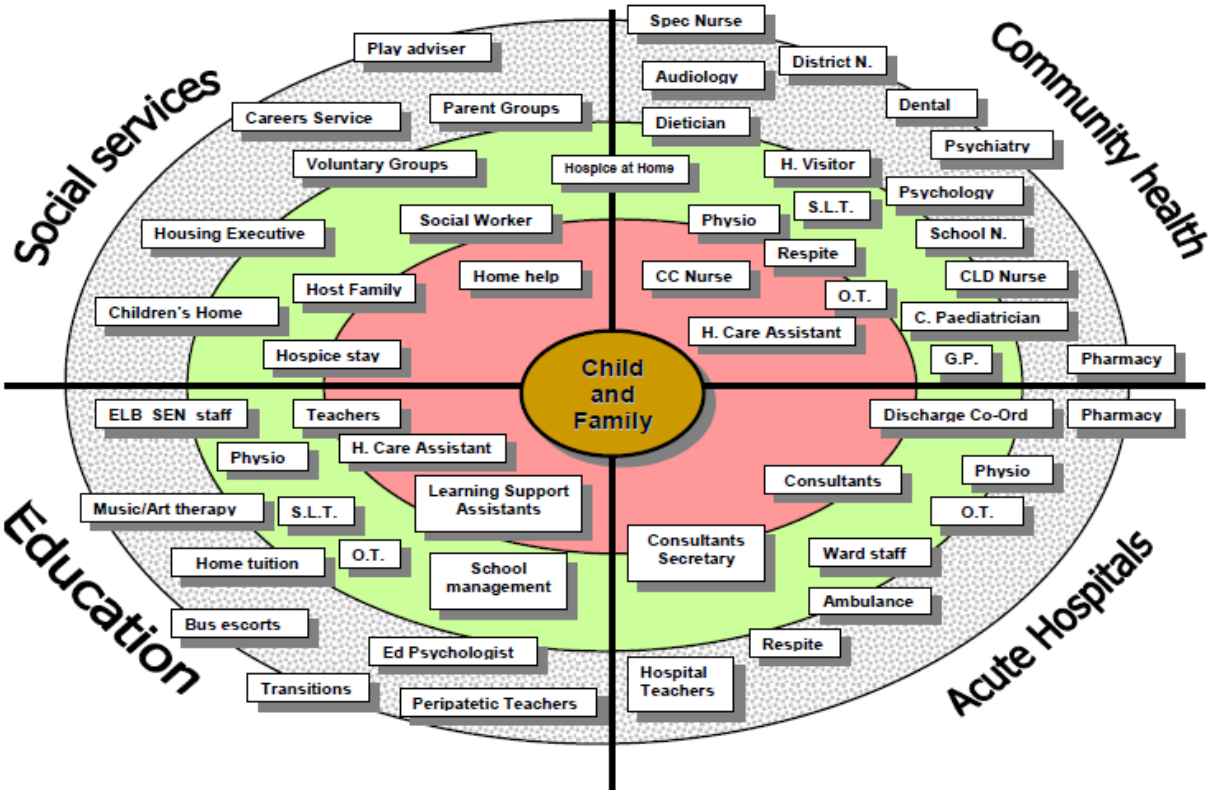
The contribution of Teaching Assistants at all levels is crucial in supporting children and young people with Complex Learning Difficulties and Disabilities. We recommend that detailed consideration be given to the training needs of Teaching Assistants working in the area of Complex Learning Difficulties and Disabilities.

TOWARDS TRANSDISICPLINARY WORKING

As Lacey[129] states, 'Collaborative teamwork is a complex concept'. For children and young people with CLDD, there are often high level health, social and educational needs associated with their conditions. For some, this requires multiple interventions from many professionals.[130] These professionals can unwittingly contribute to an intervention scrum with the family and child as the ball at its centre.

Transdisciplinary working at its best is able to take away the elements of depersonalisation, incompatible targets, and impossible scheduling of appointments with the transdisciplinary team (including the family) prioritising and rationalising their support for the young person in a way that enhances their quality of life and that of their family.

The diagram below shows the constellation of professionals who may be involved with children and young people with CLDD.



Professional involvement with children and families[131]

[129] Lacey , P. (2001) *Support Partnerships: Collaboration in action*. London; David Fulton Publishers.
[130] Boddy, J., Potts, P. and Statham, J. (2006) *Models of Good Practice in Joined-up Assessment: Working for children with 'significant and complex needs'.* London: Thomas Coram Research Unit, University of London. [Online at: https://www.education.gov.uk/publications/eOrderingDownload/RW79.pdf; accessed: 27.7.11]
[131] McConkey, R., Barr, O. and Baxter, R. (2007) *Complex Needs: The nursing response to children and young people with complex physical healthcare need.* Belfast: University of Ulster.

In transdisciplinary practice[132] professionals collaborate closely with the aim of delivering a holistic, child-centred intervention. Pagliano[133] defines this approach:

> *In a transdisciplinary team the roles are not fixed. Decisions are made by professionals collaborating at a primary level (rather than at a secondary level as in a multi-disciplinary team). The boundaries between disciplines are deliberately blurred to employ a 'targeted eclectic flexibility'.*

King et al.[134] based on work by Foley[135] identify three essential operational features of transdisciplinary practice:

- Arena assessment – professionals from multiple disciplines make a simultaneous assessment of the young person
- Intensive, ongoing interaction – this enables professionals to 'pool and exchange information, knowledge, and skills, and work together cooperatively'
- Role release – professionals working in the transdisciplinary team enskill one another to help deliver other professional aspects of an intervention under the specialist's supervision.

This is embodied in the Team Around the Child (TAC) approach which places the young person and their family at the collaborative heart of the approach.[136]

Transdisciplinary collaboration is an important principle in working with children and young people with CLDD and is one which the CLDD research project sought to promote through its multidisciplinary advisory group, who worked alongside schools and research assistants. Michael Brown, nurse consultant with NHS Lothian and Napier University, and advisor to the project observed:

> *This transdisciplinary interactive approach to Engagement is evolving a common shared language and understanding that is applicable to all disciplines.*

Transdisciplinary working in the CLDD project

In the course of the CLDD research project, we identified areas of promising practice for students with CLDD. St Nicholas school in Canterbury was involved in the development phase (Phase 1) of the CLDD Engagement for Learning Resource Framework.

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[132] For a detailed discussion of the structure and purpose of multi-, inter- and transdisciplinary teams, refer to Lacey , P. (2001) *Support Partnerships: Collaboration in action*. London; David Fulton Publishers.

[133] Pagliano, P. (1999) *Multisensory Environments*. London: David Fulton.

[134] King, G., Tucker, M., Desserud, S. and Shillington, M. (2009) 'The application of a transdisciplinary model for early intervention services', *Infants & Young Children*, 22 (3), 211–223.

[135] Foley, G.M. (1990) 'Portrait of the arena evaluation: ssessment in the transdisciplinary approach'. In: E. Biggs and D. Teti (eds), *Interdisciplinary Assessment of Infants: A guide for early intervention professionals* (pp. 271–286). Baltimore: Paul H. Brookes.

[136] Limbrick, P. (2009) TAC for the 21st Century: Nine essays on Team Around the Child. Clifford: Interconnections.

Case study: Working together for better outcomes[137]

St Nicholas is a community day special school whose student population has a wide range of learning disabilities, including severe learning difficulties, profound learning difficulties, complex learning difficulties, autism and sensory impairments.

In 2007, the school developed a transdisciplinary 'Shared goals' initiative so that professionals working with the most complex students, their families and carers, could work together to create a holistic and supportive approach to the student's development and learning. Six planning meetings per student during the year are attended by all involved to assess, review, plan and adapt approaches.

The key benefits of the approach to our students are:

- Interlinking goals from different disciplines with a common aim and clear direction/strategies
- Transdisciplinary working – therapists get regular information about the student's progress even if they cannot physically be with/work with the student
- Teaching staff at the school get a clear programme of how best to work with the student to optimise their individual learning and functional skills development
- A focus on functional skills, 'real skills that matter', that will make a real impact on the student's life
- Ability to show achievement.

This approach generates high quality, reliable student progress. It is a truly shared approach with the student at the centre.

CLDD research project case studies

While the project did not collect information specifically on transdisciplinary working, where there was collaboration, there were significant steps forward in facilitating students to learn. Schools wrote:

- *The project has been useful for Meera because it has given a focus for pulling together knowledge from a range of different people, including people who would not usually contribute. They did not realise the importance to everyone else of the little things they knew about her. They now realise that 'That thing that I noticed is important for us all to know and to share'. Having the Engagement Profile and Scale has focused people's knowledge.*

- *Even a change to seating can make a difference. Laurie's awareness and anticipation is really low. We asked the OT to look at her and she suggested a foot rest. It made a difference to Laurie's attention – she even started to look for the chair with the foot rest.*

[137] St Nicholas School (2008) 'Working together for better outcomes', *Special Children,* (June/July), 40–44.

Another school worked with Abby, a young woman with quadriplegic cerebral palsy and impaired vision and hearing. She presented as having little interest in engaging with people or activities and was easily distracted. She would startle and hit out when approached. The class teacher, teaching assistants and OT worked together to assess Abby's seating to improve her head positioning. Abby's new headrest improved her line of vision so she was able to anticipate people's approach and the activity in question. She started to interact with staff, show an interest in her peers and other activities, and show greater confidence when using switches to communicate and make choices.

In their recent review, [138] Ofsted found 'better accountability from different aspects of provision when providers had a mixed team of professionals from different disciplines.' The project would like to see further research on the impact of transdisciplinary working in schools for students with CLDD. A mixed group of teachers and therapists involved in a focused discussion during the CLDD research project's development phase suggested that the Engagement Profile and Scale would be very useful in providing evidence of progress towards therapeutic outcomes which could not otherwise be evidenced. One therapist in an international school who took the lead educator role commented:

> *I…was thrilled to be in a position to quantify a very qualitative aspect of our students learning. I also enjoyed the organic process the project took as we moved through it and that we ended up somewhere different to where we thought we would (as the process is student centred and not dictated by us).*

This may be one area in which the CLDD Engagement for Learning Resource Framework could be further trialled.

The following case studies from another of the CLDD research project's Phase 1 development schools illustrates the effectiveness of transdisciplinary collaboration in terms of effective outcomes for students.

RECOMMENDATION 11

Collaborative approaches are key to unlocking the innate abilities of children and young people with Complex Learning Difficulties and Disabilities. We recommend that transdisciplinary practice is encouraged wherever possible through joint initiation between the Department for Education and the Department of Health

[138] Ofsted (2010) *The Special Educational Needs and Disability Review: A Statement is not enough.* London: Ofsted.

CASE STUDIES FROM RIVERSIDE SCHOOL, ORPINGTON

CHARLOTTE PARKHOUSE: Speech & Language Therapist

CLAIRE TILLOTSON: Music Therapist

Case study 1: Communication through music

Anya is a young woman of 15 years who attends a day special school for students with severe or profound learning difficulties, and is diagnosed with autistic spectrum disorder, attention deficit hyperactivity disorder, developmental language delay and learning difficulties. The professionals involved in Anya's education are the CAHMS, and the school's speech and language therapist, and music therapist.

Barriers to learning

Anya's communication is pre-verbal. She uses some signs (e.g. 'biscuit', 'more') and has developed some photo choice making, but her successful motivators are restricted, tending to be food. She takes adults by the hand to make requests (usually food related). Anya frequently interrupts lessons to ask for food or drinks using her PECs book, which prevents her from engaging successfully in learning activities.

Anya's other barriers included: her behaviour difficulties; repetitive rocking and hand movements; repetitive and loud vocalisations not used functionally/purposefully; and difficulties in engaging in learning.

Transdisciplinary working

While the class teacher worked on reducing the frequency with which Anya requested snack breaks, the speech and language therapist and the music therapist decided to collaborate on a parallel project within therapy sessions. (Speech and language therapy and music therapy are highly compatible as they work on similar interaction and engagement principles.) The therapists' aim was to establish meaningful choice making for Anya in an area other than food.

Music therapy provided a context and opportunity for communication, which Anya wasn't accessing in other settings. The activity and targets were holistic - her communication needed to be viewed as part of her overall need for sustained engagement, not as a separate skill. It extended Anya's choice making beyond food. This was hard to achieve solely with speech and language therapy techniques, but music therapy alone was not able to offer choice.

The two therapists agreed the following shared targets:

- For Anya to sustain her engagement in a motivating shared interaction activity that does not involve food and drink.
- For Anya to extend her repertoire of functional and intentional choice making using photographs.

Working on speech and language therapy principles for establishing communication:

- The 'motivation' – was provided by music
- The 'means' – was A4 size photo cues
- The 'opportunity' – was choice making between two instruments using the photo cues.

When offered a choice between two photos, each representing a different instrument, Anya showed understanding of what the photos represented. She became excited and laughed as she prepared to make the choice. She then took the photograph of her favourite instrument – the piano. This was a very definite indication of her choice not seen in other situations.

The two therapists found it enriching working with one another. They shared each other's roles, working together both on music and speech and language therapy interventions, backed up by good communication outside sessions with Anya. During sessions, they both saw Anya interacting in ways they had not seen before. The whole communication/music experience was also meaningful and enjoyable for Anya (as well as both the therapists!) and she was totally engaged in the process. She did not feel the need to make requests for food or drink.

CASE STUDY 2: Breaking away

Mike, aged 9, has a very complex diagnosis including spastic quadriplegic cerebral palsy, dystonic posturing, epilepsy, cortical visual impairment, microcephaly, global developmental delay and severe learning difficulties. He receives input from physiotherapy, occupational therapy, speech and language therapy, hydrotherapy, rebound therapy sessions, music therapy and finally nursing.

Barriers to learning

Mike is a delightful and engaging young man with a big personality and a great sense of humour. A major barrier to his learning are his complex medical needs, which frequently cause him pain, and leave him tired and unable to engage.

Mike is very sociable amongst people he knows. His understanding is very good, and he forms very strong bonds with people he likes. However, this led to an extreme dependence

on his keyworker to the detriment of his independence and learning. He frequently refused highly motivating activities, even lunch, if he did not have her full attention. He also refused to use alternative and augmentative communication methods without her support. Mike's keyworker also tended to guess his choices and decisions, thus negating the need for him to communicate using a formal method.

Based on this issue, Mike's class-based engagement target was chosen to be: 'To engage with a range of people in a range of settings'. To support this target, the physiotherapist, music therapist and speech and language therapist collaborated on a transdisciplinary, complementary programme in parallel with the class engagement initiative.

Transdisciplinary working

In strengthening Mike's formal communication systems, the speech and language therapist, music therapist and physiotherapist worked together in a transdisciplinary way. Mike was very motivated by singing, so the music therapist became involved in this transdisciplinary intervention. In order to facilitate his communication and interaction, Mike needed support to position his body so that he was able to communicate more freely. The physiotherapist therefore also agreed to join the collaborative sessions. With the three therapists supporting Mike, his key worker was not needed in the session, therefore separating him from reliance upon her.

In working with Mike, the three therapists had complementary targets:

The music therapist wanted to explore with Mike ways of expressing himself through vocalisation to music in ways he had not been able to do before, to extend the length of time he was focused and engaged, and to establish a connection between cause and effect.

The music therapy provided the motivation for Mike to communicate. To use eye point/gaze to best effect, the speech and language therapist needed him to be in the best possible physical position. She aimed to increase his confidence in communicating away from his keyworker, and help him establish control/choice in therapy sessions.

The physiotherapist, in addition to providing the optimum position for Mike's communication and interaction was interested to see what positions she could establish for him so he had maximum functionality. Music and making choices also provided a motivator for him to move, thus addressing some other physiotherapy targets.

The benefits of this combined intervention for Mike were increased independence from his keyworker, growing confidence in communicating, and enjoyment of the session. During these times, he achieved sustained, motivated and confident communication with a range of adults.

For the three therapists, transdisciplinary practice enabled them to transcend the disciplinary boundaries which lock us into fixed roles and responsibilities.

PREPARING FOR ADULTHOOD

What does transition from KS 4 to Further Education look like for young people with CLDD?

Introduction

Transition is used to describe the period of time between the ages of 14 and 25 that young people make decisions about their future and experience changes in the way they live their lives.[139] There has been a lot of research into what makes a successful transition for children who have a typical pattern of development. If a student is to be successful in transition to community life, a comprehensive curriculum must be in place. The most effective curriculum will incorporate three basic pathways or domains: academic; vocational; and community life and residence. However this difficult time is further compounded if the young person has an additional need or learning disability of difficulty.

> *Disabled children and their families pose a particular challenge to those charged with developing a sustained welfare system as their support needs are unlikely to reduce.*[140]

Although research into transition on the whole encompasses the needs of young people with SEN, inquiry into the needs of the most vulnerable young people within society – those with CLDD – is less evident in the literature.

Young people with CLDD are included in the education system and will need to make the transition to post compulsory education or employment. How will their needs differ, and how can communities best support them to live a safe and valued life? These are a new group of children with recently defined needs, what does transition look like to them?

Project design

The project was commissioned as a part of the CLDD research project to gain a snapshot or current overview of transition for children with CLDD. The project was lead by Jodie Fotheringham and Carolyn Purslow from Ellen Tinkham School, Exeter, with advisory input from Professor Barry Carpenter and Wendy Skyte of the SSAT.

Four schools contributed to the project. Initially two students from each provision were selected. However, due to time constraints and issues regarding consent, only six students were involved in this phase of the project. All students and staff were interviewed using semi-structured interview

[139] McGrath, A. and Yeowart, C. (2009) *Rights of Passage: Supporting disabled young people through the transition to adulthood*. London: New Philanthropy Capital.
[140] Murray, P. (2010) A Fair Start: *A personalised pathway for disabled children and their families.*Sheffield: Centre for Welfare Reform/Health Service Management Centre, University of Birmingham. [Online at: http://www.birmingham.ac.uk/Documents/news/a-fair-start.pdf; accessed: 11.8.11]

schedules. Interviews took place in a familiar environment so they felt as relaxed and open as possible. The aim of the interviews was slightly different with staff and students. In interviews with students we were aiming to capture student voice and opinion about the progress of their transitions, whether they were happy and which elements of the process they were finding useful. Staff were encouraged to reflect on the process of transition within their setting more generally. They were also asked to comment on what the needs of CYP with CLDD and what could be improved to better meet their needs. The results were captured in case studies.

Project findings and themes

Training

A major theme that runs through the interview response is the need for training of staff working with young people in CLDD. There are many unskilled staff working in positions where they are required to support the most challenging and vulnerable children included within the education system. This seems even more apparent within the process of transition. Lack of understanding of the needs of these young people with CLDD leads to transition failure and this needs to be addressed and prevented. The significance of this for young people's long term outcomes is clear from the recent evidence base, as:

> *Although young people with more complex needs can face additional challenges finding and securing work, creative and innovative approaches can support them to make a valuable contribution to society.*[141]

Personalisation

This links directly with personalising transition placements. Young people with CLDD need to have provision that is completely personalised in order for it to succeed. By the very nature of their diagnoses children with CLDD will have inconsistent or uneven profiles. Strengths demonstrated by these children may not be group in one area of learning. However strengths are apparent. With the correct training and personalised provision, young people with CLDD are able to engage in deep learning and extend this. Contribution to society through meaningful employment is the ultimate outcome. However, complexity of need can also be overlooked among high functioning young people with difficulties and disabilities. A recent report describes the vulnerability and fragile outcomes for those young people who are academically able, but need ongoing functional support.[142]

Relationships

Relationships are also a crucial element of the transition process and it appears that staff who manage transition, desire earlier intervention in order to build links with other professionals. This will allow the students to feel safe and protected within these settings. Young people can at times be disenfranchised and 'lost' within the education system. Good relationships can help to build a sense of self and a desire to want to take control of their futures. If this is difficulty, due to a CYP's disability, then provisions should be linking with other agencies and support to increase this and complete *truly* personalised transition

[141] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.
[142] Brooks, J. (2011) *'Mind the Gap!': Supporting high functioning ASC students transition to adulthood.* London: Advisory Service, Garratt Park School.

plans. In particular for children with complex health needs, 'moving on from using children's health services, transition can sometimes feel like a "cliff-edge"',[143] highlighting the importance of relationships in providing security and belonging.

Funding and withdrawal of services

There was consensus throughout the interviews that transition services are being withdrawn. In addition there is a lack of service links. Effective transition services require an available set of skilled settings for children to make the transition to. Questions arise from this. For example, when young people with SEN are the most expensive to education, why does the withdrawal of services occur when they are in a position to contribute and provide an economical return on investment? Staff need more options for these children and young people and more flexibility within the curriculum to concentrate on engaging them within education to increase the likelihood of 'real learning'.

Aspiration

The aspirations of young people are also in danger of being compromised when it comes to transition. Throughout the interviews there was a noted difficulty in finding appropriate placements for these young people because the options do not support their learning profiles. This is noted in other recent research. Ofsted found that for many of those with CLDD aged 16 and over, the choices of courses and other opportunities were very limited.[144] In addition young people with SEN are twice as likely not to be in education, employment or training, and many young people with complex support needs find it hard to make a successful transition from school to an adult life with work, friendships, good health and independence.[145]

Conclusion

The difficulties with transition into adult services and society for young people with SEN is well documented, and it seems that for young people with complex profiles the issues are even more apparent. It appears that lack of training for staff results in transitions that are not personalised to these young people's needs. This, combined with lack of provision and withdrawal of funding, reduces opportunities as well as staff morale. Consideration needs to be given to the impact of the withdrawal of services and funding. The reported damage to service provision, as well as the aspiration which professionals hold for the young people they support should be taken seriously. More detailed research needs to be completed to ascertain the impact that transition has on these complex young people's lives.

[143] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.
[144] Ofsted (2010) *The Special Educational Needs And Disability Review: A statement is not enough.* London: Ofsted.
[145] Department for Education (2011), Ibid.

RECOMMENDATION 12

Young people with Complex Learning Difficulties and Disabilities are experiencing considerable challenges in the process of preparing for adulthood. We recommend that specific research be undertaken to identify more accurately their needs in the transition process.

THE FAMILY PERSPECTIVE

At the birth of a child with CLDD, families have, overnight, a life changing situation.[146] As Thistlethwaite[147] writes:

> *With no warning, they step into unknown territory, more often with complete strangers as their first point of contact for this new journey.*

However, there is currently a mismatch between our education system and the needs of families. Services have been unprepared for the tsunami of children with CLDD, and the significant alterations in service delivery style, organisation, curriculum and pedagogy needed.

The families of children with CLDD are truly pioneers, charting new pathways in raising their child. They will have created their own care support, therapeutic interventions and educational approaches, based on their deep and rich understanding of their child, long before any school-based professional ever comes into contact with them. The knowledge and expertise of families in supporting children with CLDD should, therefore, be acknowledged and respected. As McConkey, Barr and Baxter note:[148]

> *Parents know their child better than anyone else and must be treated respectfully by professionals as equal partners given the expertise they have in the care of their child.*

The demands on parents mean that they have been required, as one teacher said, to 'parent beyond their capacity'. What we are seeing are children of whom even the most experienced professional has little or no experience.

Children born prematurely are presenting with configurations of development that have previously not been seen. Children with rare syndromes, who only two decades ago would have died in infancy, now, through skilled medical interventions, survive into childhood and enter our school system. All of the time the family, through its love, nurture and support, breaks new ground in its parenting and care giving – day after day, week after week, year after year.

One mother of a son born prematurely describes her experiences:

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[146] Carpenter, B. (2010a) Think Piece 2: Children with complex learning difficulties and disabilities. [Online at: http://blog.ssatrust.org.uk/thinkpiece/; accessed: 4.7.10]

[147] Thistlethwaite, J. (2010) Response to Think piece 9: The Family Journey. [Online at: http://blog.ssatrust.org.uk/thinkpiece/; accessed: 4.7.10]

[148] McConkey, R., Barr, O. and Baxter, R. (2007) *Complex Needs: The Nursing Response to Children and Young People with Complex Physical Healthcare Need.* Belfast: Institute of Nursing Research, University of Ulster /Department of Health.

My son was born at 24 weeks. He is five years old, and commenced a mainstream primary school this September. He has a statement of special educational needs. He has been diagnosed with global learning delay and has difficulty with his behaviour and attention.

I would like to say how pleased I am that at last professionals are understanding that children like my son have very different needs, and research is desperately needed. I would like to be able to say that my son has 'additional needs of extreme prematurity', but that condition does not exist in the medical or teaching world.

I often dread picking my son up from school to be informed of his antics. I will dutifully go through the motions of discussing his behaviour with him and the teacher, but really I feel very sad for him because it is not all his fault. The teachers do not understand that sometimes he just cannot help his behaviour. He is definitely wired differently to his peers![149]

The experiences of students' families in the CLDD Research Project

As part of the initial stages of the CLDD research project, families of the 60 cohort children were interviewed to gain a deeper insight of the children's motivators and learning – at school and in the home, to help us shape an engagement profile and a pathway to personalised learning. Other areas covered in the interviews included communication between home and school, fondest memories of the child, and hopes for the future.

The theme most prominent from all of the interviews was that of the happiness the child brings to the family and the pride and elation that follows witnessing their child achieve, however minor. Parents discussed memorable and joyous events, such as the first time their child: spoke, defying all medical beliefs; walked in a frame, despite being told they might never stand; overcoming anxieties and taking part in a school production. However it is also the smaller things that these children do that provide the family with joy daily:

When he reaches out for your hand to stroke or hold…

It's the little things… I just love taking him out because he buzzes, even just driving in the car. I like just seeing him happy

Another area which was discussed frequently across the interviews were the battles families have endured through their children's lifetimes to get the support and services their children require. Fights for resources, equipment, school placements, respite, one-to-one

[149] Ricks, S. (2010) In B. Carpenter *The family context, community and society (Complex needs series).* London: SSAT.

classroom support and therapeutic intervention leave families exhausted, but shows the persistence and determination required to receive the best opportunities for these children. This persistence is also demonstrated through the approach families have to their child's learning of skills and concepts:

> *You try and try again, and if that does not work, try something else.*

The majority of families are very happy with their child's school and education, with many families having seen significant development in their child since they have been attending a school appropriate to their needs. Some acknowledged how hard it can be to not see your child progress despite determined intervention, and for some to accept that they may regress:

> *I didn't realise his learning would be so difficult – sometimes it seems that he is progressing and then he takes 2 steps back*

Families who are not as satisfied feel that much of the curriculum is not suitable for their children. They feel that there is too much emphasis on specific subjects such as French and Geography, for example, and not enough on basic life skills, communication, social interaction, play and therapies. Other parents feel their children are not challenged enough – they feel that some educators underestimate the intellectual capabilities or potential they have. Sometimes these are often masked through having limited communication, profound physical impairments, or through behaviour and bravado. Parents interviewed stressed the importance of personalisation, in both the curriculum being tailored to individual need, but also to the child's motivations. Asking families about how their child learned in the home when growing up, many said that this was achieved through using what motivates them as both a resource to teach and/or as a reward. Siblings were often part of this learning, helping to read, write, and assist with daily living skills.

Linking with the importance of personalisation came many references to the need for consistency both at home and at school, and the value of relationships. Some children need the predictability of the routine to engage without anxiety, others require the same approach used with them consistently everyday to enable them to understand their environment and make a contribution. Other families stress the importance of the staffing being consistent; without the same team of people working with the child daily, staff cannot learn the complexities of their health, learning and behavioural needs. This ultimately limits the child's progression. Good relationships between children and staff, children and family, and staff and family provide trust and the basis of consistency, and stem from knowing the child well. One parent said:

> *You need to know him to help him.*

Communication is the families' dominant priority for their child's development. Families say that it is wonderful to have different communication systems in place, both low and hi-tech, but they would like the proper use of these explained to them to ensure consistency between school and home. Some families would like there to be more of a focus on appropriate communication strategies for their child.

> *When she started using the DynaVox, for years I'd dreamt that she could speak to me and now she can answer you and she has a voice. It brings tears to my eyes. Communication is a massive part of our lives, but you don't know if you don't have it.*

All families want good communication with school and care. In the main, communication is good, with regular correspondence via home/school diaries and telephone calls with teachers, teaching assistants and key workers. Families say that this ensures both sides are informed of important goings-on and keeps them at ease. For others this communication can be inconsistent. Some would like diaries to focus more on positives and content of the school day, rather than just behaviours. Many parents, particularly those with children in residential settings, would like more information and photographs showing what their child is learning, as they do not have communication systems such as the home/school diary in place.

The importance of communication between home and school is reinforced by other recent research. For example, Ofsted[150] note that where 'excellent' communication and consistent support between school and home is established, parents and carers, together with school staff, can develop consistent ways of working with young people with complex needs. This enables children to transfer their social learning to different situations. It is also acknowledged that whilst a structured environment is helpful, it is also necessary to understand the family and social context to which children and young people return at the end of the school day or school term.

Families did discuss anxieties for the future: will their child's behaviour be tolerated in the community; will they be able to communicate what does the future hold for them - will they ever be able to work? The main desire for the future was for their child to be happy and to be reaching their potential, with a focus on developing communication and independence skills:

> *...for him to keep progressing and become more independent*

[150] Ofsted (2010) *The Special Educational Needs and Disability Review: A statement is not enough.* London: Ofsted.

...for her to have as normal a life as possible. To be able to go out and work and get a career. To be happy and get somewhere in life.

RECOMMENDATION 13

Families of children with Complex Learning Difficulties and Disabilities are charting new care practices, therapeutic interventions and education pathways. We recommend that, in a spirit of equal partnership, professionals learn from these families, and apply their knowledge and insight to personalise programmes.

DISCUSSION

The aim of this research project was to develop and trial resources which would support educators in increasing the engagement in learning of students with CLDD using an action research approach. The outcome has been the CLDD Engagement for Learning Resource Framework, consisting of the Engagement Profile and Scale, CLDD briefing packs and the Inquiry Framework for Learning.

The resources were developed to support educators in constructing personalised learning pathways for students with CLDD (see definition, p. 22). These students are often wholly or partially disengaged from learning, and the Department for Education has stated their awareness that educators struggle to deliver the educational entitlement of these learners, and to develop appropriate educational strategies to meet their needs. [151]

Through a reading of literature around CLDD, engagement was established as a fundamental prerequisite for learning. Engagement is the means by which a student can connect with their learning target (see definition, p. 68). Over the course of the CLDD research project an action research approach was employed in developing and refining the CLDD Engagement for Learning resources. Educators used the resources in classrooms with students with CLDD, and feedback was sought from them leading to their refinement and subsequent re-trial.

Through this research, the CLDD research team sought to establish:

- An effective design for resources to support educators in working with students with CLDD, through identifying difficulties and solutions to implementation
- How well the CLDD Engagement for Learning resources worked for educators in everyday practice
- How the resources impacted on students' engagement in learning
- Educators' perceptions of the benefits of using the resources
- Ways in which the CLDD research project addressed current educational themes.

It is important to remember that this research was concerned with resource design and implementation. Trialling of resources was undertaken with a design modification brief in mind, and was not intended to be formally evaluative of the final resources. Educator perceptions collated during the research project are therefore taken as an indication of resource effectiveness, but it should be understood that further formal evaluation is necessary.

As this research was qualitative and purposive, implications for practice cannot be generalised more widely than this participant group. However, the identified trends and themes may be of interest to those concerned or working with similar populations of students as those participating in the CLDD research project.

[151] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.

The comparison between trials during the different phases for the CLDD Engagement for Learning resources is shown in the tables below. Although numbers of participants in most instances are too small to warrant percentages, these have been added to allow some comparison across phases.

Indications of the relevance and success of the CLDD Engagement for Learning resources to practitioners in supporting engagement of their students with CLDD were ascertained through:

- Engagement outcomes for individual students measured using the Engagement Profile and Scale
- Educator perceptions of the effectiveness of the specific resources in supporting their practice in engaging students with CLDD
- Educator perceptions of additional outcomes for students through implementing the CLDD resource framework
- Educator perceptions of their practice development in using the resources
- Future plans of schools involved in the research around implementing the resources
- Findings from the resources in the context of current educational concerns.

Engagement outcomes for the students involved in the CLDD research project

Students showing an increase in engagement over the CLDD research project intervention period

ENGAGEMENT OUTCOMES FOR STUDENTS FOR INTERVENTION PERIOD **(Data from engagement profile and scale)**	Outcomes for students with usable data outcomes (n=no. of students with usable data; % of total students per phase with usable data)			
	Phase 1 SEN development students *(n=55)*	Phase 2 SEN UK trial students *(n=87)*	Phase 2 SEN international trial students *(n=26)*	Phase 3 Mainstream trial students *(n=16)*
Increase in student engagement	45 (**82%**)	74 (**85%**)	22 (**84.5%**)	13 (**81%**)
Neither increased nor decreased	1 (**2%**)	8 (**9%**)	1 (**4%**)	1 (**6%**)
Decrease in engagement	9 (**16%**)	5 (**6%**)	3 (**11.5%**)	2 (**13%**)
Compromised/no data	*5 students*	*13 students*	*4 students*	*8 students*

The data collected using the Engagement Profile and Scale for individual students across all phases of the research suggested that for the period of intervention the proportions of students showing an increase in engagement as a result of interventions using the CLDD Engagement for Learning resources were broadly similar:

- 81–85% (av. 83%) students showed increased levels of engagement
- 2–9% (av. 5.3%) students showed neither increased nor decreased levels of engagement
- 5.5–16% (av. 11.6%) students showed decreased levels of engagement.

This information relates to engagement scores alone; however, the scores were supported by descriptive data which included contextualising (e.g. aim, objective, strategies, environment, student mood, etc.), and observational information (e.g. what worked, what did not work and proposed next steps).

Data was considered compromised when: the focus of observation did not relate to the learning target; scales were only partially competed; data showed no clear strategies or consistency.

Early years settings
Two early years settings also trialled the resources. All four students in the settings showed an increase in student engagement across the period.

Notwithstanding the high proportions of students for whom increasing levels of engagement were recorded over the intervention period, it would be informative to analyse further the reasons for these outcomes. However, a brief overview is given below.

In cases where students demonstrated static or decreasing levels of student engagement, educators suggested possible reasons which included:

- Positive outcomes for students not shown by the Engagement Profile and Scale – possibly requiring an adapted target
- The impact of other confounding difficulties (e.g. mental health issues, home situation)
- Intervention unsuitable / ineffective for student (leading, in one case, to a review of a student's communication system)
- Temperament of student (e.g. student became less responsive with familiarity of intervention; student attachment to specific staff)
- Inconsistencies of implementation (e.g. due to student absence/ill health).

Outside the scope of the research project, some of these issues could be addressed by schools; for example: additional training on engagement/resource implementation; additional interventions to resolve other complex issues which impacted on learning (e.g. mental health; home situation).

There was also a range of issues which led to compromised (i.e. irreconcilable) data from schools:

- Incomplete data (e.g. undated; lack of target; lack of supporting descriptive data)
- Lack of clear stated aims/objectives or strategies
- Lack of contextual consistency (e.g. no limitation of variables)
- Lack of consistent implementation (e.g. of strategies or over time)
- Data collected irrelevant to selected student target.

It was felt on discussion with the core research team that compromised data from schools may have at its base a lack of fundamental understanding – of the concept of engagement; of evidence-based practice; of the need for focus – and/or a lack of priority in implementation (either articulated or demonstrated). The first could again be resolved through further training; the second by senior leadership involvement – identified as key to the success of implementation by some schools. Despite liaison with schools, these issues often became clear only towards the end of the implementation periods.

Further investigation of successful interventions may identify key features of effective implementation of the CLDD Engagement for Learning framework by practitioners which would provide others with guidance.

Educator perceptions of additional outcomes for students through implementing the CLDD resource framework: a summary

School[1] perceptions of learning outcomes for students over the CLDD research project intervention period

SCHOOL PERCEPTION: **School perceptions of learning outcomes for students** (Data from exit interviews)	**CLDD research project phases** (n=numbers of schools)[1]			
	Phase 1 Development schools *(n=12)*	**Phase 2 SEN UK trial schools** *(n=50)*	**Phase 2 SEN international trial schools** *(n=15)*	**Phase 3 Mainstream trial schools** *(n=12)*
Positive response	Question not included in development school exit interview	40 (**80%**)	13 (**87%**)	11 (**92%**)
Response talked of teaching not learning outcomes		3 (**6%**)	2 (**13%**)	1 (**8%**)
Negative / neutral response		7 (**14%**)	0	0

[1] NB In the context of exit interview data, 'school' refers to the individual(s) belonging to a school who took part in the exit interview.

School[1] perceptions of emotional and social wellbeing outcomes for students over the CLDD research project intervention period

SCHOOL PERCEPTION: **School perceptions of emotional and social wellbeing outcomes for students** (Data from exit interviews)	**CLDD research project phases** (n=numbers of schools)[1]			
	Phase 1 Development schools *(n=12)*	**Phase 2 SEN UK trial schools** *(n=50)*	**Phase 2 SEN international trial schools** *(n=15)*	**Phase 3 Mainstream trial schools** *(n=12)*
Positive outcomes	Question not included in development school exit interview	29 (**58%**)	5 (**33%**)	12 (**100%**)
Increased self-esteem		8 (**16%**)	0	2 (**17%**)
Improved relationships		14 (**28%**)	2 (**13%**)	9 (**75%**)
Improved wellbeing		9 (**18%**)	1 (**7%**)	8 (**67%**)

[1] NB In the context of exit interview data, 'school' refers to the individual(s) belonging to a school who took part in the exit interview.

In Phase 1, the development phase, schools involved were not asked about positive outcomes for students as this was already known from close contact with research assistants. As foreseen, the CLDD Engagement for Learning resources had also changed significantly across the development phase, which affected student outcomes and educator practice. The outcomes from work with development schools was written up in individual case studies (see Appendix 5).

In Phase 2, 44 (90%) UK SEN trial schools identified positive learning or social/emotional outcomes for their students from working with the CLDD Engagement for Learning resources. Forty schools identified positive learning outcomes for students (80%), but seven (14%) did not. The reasons identified were:

- Students showed engagement increase over period from Engagement Profile and Scale data, but the school response to the exit interview did not directly answer the question (e.g. talked of teaching outcomes, difficulties with transdisciplinary working) (3)
- Students showed engagement increase over period, but inconsistently (2)
- Compromised Engagement Profile and Scale data (e.g. no clear strategies related to intervention) (2).

However, two of these schools did identify positive social emotional outcomes for their students.

For one of the two international trial phase schools which did not identify a positive learning outcome for their students, the focus of the interventions was transitioning, and therefore outcomes were social/emotional. For the second school, the scoring and educator comments on Engagement Profile and Scale data show clear positive learning outcomes for both students; however, this was not picked up at exit interview.

One mainstream school did not describe a learning outcome for their students. This school stated, as asked, the single most successful outcome for one of their students. This outcome was a social/emotional one around increased confidence due to increasing his sense of environmental safety across the project. The second student had shown no change in engagement, but the school said they thought this may be due to issues at home.

The extent of schools identifying social/emotional outcomes for students involved in the study was unexpected, but this was an identifiable feature of the exit interviews.

Early years settings

Only one of the early years settings identified learning outcomes for their children – these were improved communication skills and the ability of the child to self-manage the intervention. Of the two children involved in the second setting, one showed increased engagement, which the educator felt was only partially attributable to the project, as they thought it would have happened anyway; the other child showed inconsistent engagement over the period of intervention, resulting in a level of engagement which had neither increased nor decreased.

Neither of the early years settings identified social/emotional outcomes for their students over the period of using the CLDD Engagement for Learning resources.

Emotional wellbeing – a focus for further research

It would be instructive to carry out further research into the effect of using engagement as an educational approach on the emotional wellbeing of students with and without SEN. Across the phases, schools identified the following improvements, which can be linked to emotional wellbeing, in association with implementing the CLDD Engagement for Learning resources with students. These improvements were in the areas of:

- Social relationships – including better relationships with staff, peers, and family.
- Wellbeing and happiness – including better mental health in some cases

- Confidence / self-esteem / empowerment – including bringing out personality and increased student expectations of themselves
- Improved behaviour – including reduced aggression and greater ability to self-manage behaviour
- Increased alertness in previously passive learners.

Educator perceptions of the effectiveness of resources in supporting the development of learning pathways for students with CLDD

The two early years settings are not included in the table as numbers are too small for comparison.

Comparison of schools' perceptions of the usefulness of CLDD Engagement for Learning resources in developing learning pathways for student with CLDD across the three project phases

	Phase 1: Development schools	**Phase 2 (a):** UK SEN trial schools	**Phase 2 (b):** International SEN trial schools	**Phase 3:** Mainstream schools
Engagement Profile and Scale	n=12 *Useful/very useful* 8 (**67%**) *Quite useful* 4 (**33%**) *No /little use*	n=48 *Useful/very useful* 36 (**75%**) *Quite useful* 11 (**23%**) *No /little use* 1 (**2%**)	n=15 *Useful/very useful* 12 (**80%**) *Quite useful* 3 (**20%**) *No /little use*	n=12 *Useful/very useful* 9 (**75%**) *Quite useful* 3 (**25%**) *No /little use*
CLDD Briefing Packs	n=12 *Useful/very useful* 8 (**67%**) *Quite useful* 4 (**33%**) *No /little use*	n=42 *Useful/very useful* 34 (**81%**) *Quite useful* 6 (**14%**) *No /little use* 2 (**5%**)	n=11 *Useful/very useful* 8 (**73%**) *Quite useful* 3 (**27%**) *No /little use*	n=12 *Useful/very useful* 8 (**67%**) *Quite useful* 4 (**33%**) *No /little use*
Inquiry Framework for Learning	n=10 *Useful/very useful* 5 (**50%**) *Quite useful* 5 (**50%**) *No /little use*	n=37 *Useful/very useful* 15 (**41%**) *Quite useful* 13 (**35%%**) *No /little use* 9 (**24%**)	n=13 *Useful/very useful* 10 (**77%**) *Quite useful* 3 (**23%**) *No /little use*	n=9 *Useful/very useful* 5 (**56%**) *Quite useful* 4 (**44%**) *No /little use*

The two early years settings overall rated the usefulness of the resources as follows:

- Engagement Profile and Scale – rated 4, 'useful'
- CLDD Briefing Packs – rated 4, 'useful'
- Inquiry Framework for Learning – setting 1 rated 3, 'quite useful'; setting 2 rated 2, 'a little useful'.

Phase 1: Development of resources
(12 development schools)
The results and evaluations need to be seen in the context of the phase in which they took place. Phase 1 (November – August 2010) was the project development phase, which began with the CLDD Engagement for Learning resources were in their initial, unrefined stages. The Engagement Profile and Scale and the CLDD briefing packs were in their first drafts, and the Inquiry Framework for Learning was an idea. The accessibility and usefulness of the Engagement Profile and Scale and the CLDD briefing packs therefore increased through Phase 1 as they were refined through practice and educator/stakeholder comments. By the end of Phase 1, the online Inquiry Framework for Learning existed in its first raw draft, compiled from educator experiences of inquiry with their students and from readings of literature.

As might be expected, the evaluation of the Engagement Profile and Scale for the development period was lower than that for either of the trial periods. Although the development schools received more support in using it than the trial periods, it was in a less refined state. There were however higher levels of satisfaction with the resource across the trial stages, as can be seen above.

Phase 2: Trial of the resources in SEN schools
(50 UK SEN trial schools; 15 international SEN trial schools)
During Phase 2 (September – December 2010), the Engagement Profile and Scale and the CLDD Briefing Packs were at final draft stage. Comments made by the UK and international SEN trial schools during the evaluation helped to refine the resources further to increase the continuity in use and information gained about students from the Engagement Profile and Scale, and the presentation and design of the CLDD briefing packs.

Across Phases 2 and 3, the Advisory group and selected external specialists were also asked to comment on various CLDD briefing packs and Inquiry Framework for Learning sections. Suggested amendments were included.

Phase 3: Trial of the resources in mainstream schools and early years settings
(Six mainstream primary schools; six mainstream secondary schools; two early years settings)
Both the Engagement Profile and Scale and the CLDD briefing packs were used in their final forms by mainstream schools during Phase 3 (January – March 2011).

The online Inquiry Framework for Learning remained in early draft stages during both Phases 2 and 3, with additional contributions being made by trial schools. Comments made by users across these phases dramatically changed the form of the resource, so that in its post-project current form it has become interactive and accessible section by section. Users are now able to print out personalised lists of questions relating to individual students. A school who used both the earlier and most recent versions of the Inquiry Framework for Learning in association with the research project has commented:

> *The recent changes to the Framework on the website has made [it] less daunting to tackle and…very user friendly. I love that I can print out those questions I feel are*

relevant to my work with a specific student and look forward to using the framework in future profiles and scales.

It is interesting to note that the scoring for the Inquiry Framework for Learning during Phase 3 (mainstream trial) varied by setting type. It was scored as 2/3 ('little' / 'quite' useful) by early years settings; as 3 ('quite useful') by the three primary schools which used it, and as 4/5 ('useful'/'very useful') by the five secondary schools which used it.

The two early years settings, while scoring the Engagement Profile and Scale highly, also stated that, as early years practitioners, taking an engagement approach was already an integral part of their practice.

Educator perceptions of their practice development in using the resources

Educators across all three phases spoke about the key themes and impact of using CLDD Engagement for Learning resources during their exit interviews. The themes they raised , identified through categorical content analysis, were similar. As can be seen from Appendix 4, at no time did the exit questions prompt interviewees for responses in these areas.

The table below allows comparison between the numbers of schools which made comments relating to the identified themes across the phases. These were general comments made in relation to the CLDD Engagement to learning approach. Comments made by educators which were specific to individual resources are not included here.

Numbers of schools commenting on the positive impact of the CLDD Engagement for Learning Resource Framework on areas of professional practice

	Phase 1: Development schools (n=12)	**Phase 2 (a):** UK SEN trial schools (n=50)	**Phase 2 (b):** International SEN trial schools (n=15)	**Phase 3 (a):** Mainstream schools (n=12)	**Phase 3 (b):** Early years settings (n=2)
Reframing professional practice – Total no. of schools commenting	**8 (67%)**	**42 (84%)**	**12 (80%)**	**10 (83%)**	**2**
Awareness of student as learner	6 (50%)	28 (56%)	11 (73%)	5 (42%)	0
Thinking, reflection and analysis around practice	5 (42%)	29 (58%)	9 (60%)	6 (50%)	1
Professional focus	4 (33%)	15 (30%)	6 (40%)	5 (42%)	1
Understanding	0	9 (18%)	5 (33%)	0	0
Areas of practice – Total no. of schools commenting:	**10 (83%)**	**40 (80%)**	**15 (100%)**	**6 (50%)**	**1**
Personalising learning	8 (67%)	17 (34%)	7 (46%)	4 (33%)	0
Planning, target-setting and assessment	0	25 (50%)	6 (40%)	3 (25%)	1
Observing	6 (50%)	15 (30%)	8 (53%)	2 (17%)	1

From the figures in the table above, it would seem that a high proportion of schools in all phases felt that their practice benefited from using the CLDD Engagement for Learning framework in some way. It suggests that in addition to using the resources to address engagement issues for their students, the resources may have a role as a conceptual structure for staff to aid the more effective development of learning pathways for their students.

Future plans of schools involved in the research around implementing the resources

School[1] statements about future use of the CLDD Engagement for Learning Resource Framework

SCHOOL STATEMENTS: **Future use of the CLDD Engagement for Learning resources** (Data from exit interviews)	**CLDD research project phases** (n=numbers of schools)[1]			
	Phase 1 SEN development schools *(n=12)*	**Phase 2 SEN UK trial schools** *(n=50)*	**Phase 2 SEN international trial schools** *(n=15)*	**Phase 3 Mainstream trial schools** *(n=12)*
Continue to use the engagement for learning resources in some way	12 (**100%**)	46 (**92%**)	15 (**100%**)	11 (**92%**) (+1 'probably')
Continue to use the engagement for learning resources as trialled	7 (**58%**)	27 (**54%**)	9 (**60%**)	11 (**92%**) (+1 'probably')
Schools intending to roll out the engagement for learning resources across the school	8 (**67%**)	18 (**36%**) + 7 (14%) considering	5 (**33%**)	1 (**8%**) Secondary school – for *all* students not just SEN

[1] NB In the context of exit interview data, 'school' refers to the individual(s) belonging to a school who took part in the exit interview.

From the figures above, it would seem that a high percentage of schools involved in the CLDD research project intended to continue to use the CLDD Engagement for Learning tools in some way, although a lower percentages were intending to use the resources as trialled. Across the SEN schools, the percentage of schools intending to roll out the tools increases with increased intensity of input from the core CLDD research team, and it would be interesting to explore whether or not such an association exists. If so, it would suggest a further training implication involved with the project.

Unexpectedly, one of the mainstream schools intended to role the resources out across the whole school. The school had identified a use for the CLDD Engagement for Learning resources beyond their SEN population to encompass all their students.

Early years settings

Of the four early years educators from two settings who were involved in the project, two said that they might continue to use the CLDD Engagement for Learning resources, one said that they would continue to use the resources, the fourth said that they would use only the Engagement Profile as a support for staff working with the children.

Implications of the CLDD research in the context of current educational concerns

The Government has identified concerns in the following areas for students with complex learning difficulties and disabilities: [152]

- Mental health and emotional wellbeing
- Training the SEN workforce / The role of teaching assistants
- Multidisciplinary working
- Preparing for adulthood
- The family perspective.

Mental health and emotional wellbeing

Of the Phase 1 cohort, the CLDD research project had information relating to positive or compromised mental health/emotional wellbeing of 51 students. Among those students, there were mental health and wellbeing concerns for 28 (55%), and no such concerns for the remaining 23 (45%). This is a 150% increase on Emerson and Hatton's[153] finding of mental health issues for 36% of children with identified learning disability. This has serious implications for classroom management in both special and mainstream education.

Through the baseline data collected in Phase 1 (see p. 125), and subsequent informal discussions with colleagues in trial phase schools, the CLDD Research Project team have become aware of the under diagnosis of students whose CLDDs include mental health issues and of the difficulties experienced by educators in addressing these through the lack of specialist emotional wellbeing/mental health support in schools for all but the most severely affected young people. Young people's emotional wellbeing/mental health needs have to be addressed before these young people can engage as effective learners.

As described above, 40% (n=64) special schools and 100% (n=12) mainstream schools identified positive emotional wellbeing outcomes for students involved in the implementation of the CLDD Engagement for Learning approach. Although the approach is unlikely to ameliorate serious mental health issues, it may increase the resilience of students whose mental health is at risk and support educators in re-engaging these students in learning. Further research into the link between a CLDD Engagement for Learning approach and students' emotional wellbeing would be interesting.

Training the workforce / The role of teaching assistants

Students with CLDD are a unique group of learners with a distinctive profile of learning need. We need to equip teaching professionals to offer high quality education to these children so that they do not become alienated by inappropriate teaching ill-matched to those learning needs. [154] In the UK, Salt and Lamb[155] have highlighted the shortage of teachers effectively trained in SEN, and the paucity

[152] Department for Education (2011) *Support and Aspiration: A new approach to special educational needs and disability – a consultation.* Norwich: The Stationery Office.

[153] Emerson, E. and Hatton, C. (2007) *The Mental Health of Children and Adolescents with Learning Disabilities in Britain.* London: Foundation for People with Learning Disabilities/ Lancaster University.

[154] Fergusson, A. and Carpenter, B. (2010) *Professional Learning and Building a Wider Workforce.* London: SSAT.

[155] Department for Children, Schools and Families (2010) Salt Review: Independent review of teacher supply for pupils with severe, profound and multiple learning difficulties (SLD and PMLD). Annesley: DCSF

of training routes open to those who wish to follow that career pathway. In discussion with schools educating students with CLDD, both those involved with and external to the CLDD research project, creative responses to continuing professional development issues exemplified by the Salt review[156] were encountered – some are exemplified within this report (see p. 151).

The CLDD research project involved a range of educators from head teachers to teaching assistants and therapists. From the outset, it became clear that educators did not have the tools in their teaching toolkit to meet the needs of this diverse and rapidly changing group of students. Many were attempting to resolve curriculum and pedagogical issues based on a framework evolved in the late 20th century, and which did not incorporate the new needs profile of those children with CLDD. Their approaches were not cognizant of the contribution of neuroscience which has so rapidly progressed in the early 21st century, and which has given rich insight into the brain functioning, and hence learning patterns, of children with CLDD.

However, as described above, the CLDD Engagement for Learning approach provided a structure within which educators could move, systematically and deductively, towards implementing effective personalised learning pathways for students with CLDD through student engagement. Schools also identified a range of professional learning outcomes for educators involved in implementing the approach.

While the CLDD Engagement for Learning Resource Framework was seen as having an implication for training – whether carried out by schools for staff who were not originally involved in the project or schools requiring further training – it was also seen as a training resource by some schools. Three schools suggested that it was, in itself, professional development, and two others saw it as having a role in coaching staff. What has become apparent through the project is that the inquiry based approach to learning for students with CLDD resonates with an inquiry-focused professional learning for their educators.

Across the CLDD research project, a range of education professionals were involved. Those who took the CLDD research project's 'lead practitioner researcher' role in the collaborating schools were diverse, and this is illustrated in the table below. The range of project leads – together with other class teachers and teaching assistants involved – suggests that research in schools could be a way of reaching training needs at different levels. This project evolved an inquiry-based approach to formulating personalised learning pathways for students with CLDD. As such, this required educators to investigate, explore and discover how needs, previously outside of a teacher's professional experience could be identified and met.

Publications; Department for Children, Schools and Families Department (2009) Lamb Inquiry: Special educational needs and parental confidence. Annesley: DCSF Publications.

[156] Department for Children, Schools and Families (2010) Ibid.

Numbers of different educational professionals taking the lead educator researcher role in the CLDD research project

	SEN development schools (n=12)	**UK SEN trial schools** (n=50)	**International SEN trial schools** (n=15)	**Mainstream trial schools** (n=12)	**Early years trial settings** (n=2)
Headteacher	1		1		
Deputy headteacher	4	8	4	1	
Assistant headteacher	1	8			
SENCO				3	
Class/subject teacher/equivalent	5	33	9	5	2 (+2 shared role)
Teaching assistant		1		3 (+2 shared role)	
Therapist	1 (SALT)	1 (SALT)	1 (Music)		

The role of teaching assistants in delivering CLDD Engagement for Learning outcomes

Throughout the CLDLD research project, schools articulated the benefit of teaching assistant involvement in the CLDD Engagement for Learning approach. This was seen in terms of aiding the teachers in supporting student engagement, in enabling teaching assistants to make a more valuable contribution, and in aligning classroom practice.

Most schools commenting thought that TAs could have a future role in working with the CLDD Engagement for Learning Resource Framework, and five schools described their input as key. There was a wide range of understanding of the TA role between schools. Some schools described TAs as integral members of the staff team, and others as having separate responsibilities. Some schools saw TA involvement as part of a teacher-led class team, while others anticipated that TAs would have lead responsibility to lead on scales. One suggested a specific engagement specialist role could be created for a TA.

Schools identified the following benefits for TAs of their involvement in the CLDD Engagement for Learning approach:

- Increased autonomy
- Ability to take a more proactive role
- Ability to think more analytically
- Improved reporting on student learning outcomes
- A sense of value in their role.

However, schools also commented on the necessity of a supportive context for TA involvement, including training, allocation of time and a supportive teacher who took responsibility for management and guidance of the intervention.

Transdisciplinary working

For children and young people with CLDD, there are often high level health, social and educational needs associated with their conditions. For some, this requires multiple

interventions from many professionals.[157] These professionals can unwittingly contribute to an intervention scrum with the family and child as the ball at its centre. Transdisciplinary working can take away the elements of depersonalisation, incompatible targets, and impossible scheduling of appointments, replacing it with a transdisciplinary team (including the family) prioritising and rationalising their support for the young person in a way that enhances their quality of life and that of their family.

While transdisciplinary working was actively promoted through the CLDD Engagement for Learning training for project schools, it was not specifically investigated within the research remit. However, illustrative examples of excellent transdisciplinary practice arose in association with the CLDD research, and these are described on pages 146–153.

In their recent review, [158] Ofsted found 'better accountability from different aspects of provision when providers had a mixed team of professionals from different disciplines.' The project would like to see further research on the impact of transdisciplinary working in schools for students with CLDD.

Preparing for adulthood

Transition is used to describe the period of time between the ages of 14 and 25 that young people make decisions about their future and experience changes in the way they live their lives.[159] There has been a lot of research into what makes a successful transition for children who have a typical pattern of development. If a student is to be successful in transition to community life, a comprehensive curriculum must be in place. The most effective curriculum will incorporate three basic pathways or domains: academic; vocational; and community life and residence.

As part of the CLDD research project, the CLDD research team worked with Ellen Tinkam School, Exeter, in the context of their regional person-centred transition support programme. Six students with CLDD who were involved in transition from four schools took part in a semi-structured interview. The staff who supported them were also interviewed. These interviews identified five main strands of concern:

- Training
- Personalisation
- Relationships

[157] Boddy, J., Potts, P. and Statham, J. (2006) *Models of Good Practice in Joined-up Assessment: Working for children with 'significant and complex needs'.* London: Thomas Coram Research Unit, University of London. [Online at: https://www.education.gov.uk/publications/eOrderingDownload/RW79.pdf; accessed: 27.7.11]
[158] Ofsted (2010) *The Special Educational Needs and Disability Review: A Statement is not enough.* London: Ofsted.
[159] McGrath, A. and Yeowart, C. (2009) *Rights of Passage: Supporting disabled young people through the transition to adulthood*. London: New Philanthropy Capital.

- Funding and withdrawal of services
- Aspiration.

The difficulties with transition into adult services and society for young people with SEN is well documented, and it seems that for young people with complex profiles the issues are even more apparent. It appears that lack of training for staff results in transitions that are not personalised to these young people's needs. This, combined with lack of provision and withdrawal of funding, reduces opportunities as well as staff morale. Consideration needs to be given to the impact of the withdrawal of services and funding. The reported damage to service provision, as well as the aspiration which professionals hold for the young people they support should be taken seriously. More detailed research needs to be completed to ascertain the impact that transition has on these complex young people's lives.

The family perspective

At the birth of a child with CLDD, families have, overnight, a life changing situation[160]. As Thistlethwaite[161] writes:

> *With no warning, they step into unknown territory, more often with complete strangers as their first point of contact for this new journey.*

The families of children with CLDD are truly pioneers, charting new pathways in raising their child. They will have created their own care support, therapeutic interventions and educational approaches, based on their deep and rich understanding of their child, long before any school-based professional ever comes into contact with them. The knowledge and expertise of families in supporting children with CLDD should, therefore, be acknowledged and respected. As McConkey, Barr and Baxter note:[162]

> *Parents know their child better than anyone else and must be treated respectfully by professionals as equal partners given the expertise they have in the care of their child.*

As part of the initial stages of the CLDD research project, families of the 60 student participants were interviewed to gain a deeper insight of the children's motivators and learning – at school and in the home, to help us shape an engagement profile and a pathway to personalised learning. Other areas covered in the interviews included communication between home and school, fondest memories of the child, and hopes for the future. The themes emerging from these interviews with families were around:

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[160] Carpenter, B. (2010a) Think Piece 2: Children with complex learning difficulties and disabilities. [Online at: http://blog.ssatrust.org.uk/thinkpiece/; accessed: 4.7.10]

[161] Thistlethwaite, J. (2010) Response to Think piece 9: The Family Journey. [Online at: http://blog.ssatrust.org.uk/thinkpiece/; accessed: 4.7.10]

[162] McConkey, R., Barr, O. and Baxter, R. (2007) *Complex Needs: The Nursing Response to Children and Young People with Complex Physical Healthcare Need.* Belfast: Institute of Nursing Research, University of Ulster /Department of Health.

- The happiness the child or young person brings to the family
- Pride and elation in seeing them achieve, however small the achievement
- Battles for support and services
- The persistence and determination needed to receive the best opportunities for these children and young people
- Appropriacy of the curriculum
- The importance of personalisation and motivation in learning
- Consistency of routine and staffing
- Sharing successful interventions (e.g. communication) with school
- The importance of communication between home and school.

Throughout the project there were examples of excellent collaboration and communication with families – mostly parents – about the CLDD Engagement for Learning research and incorporation of parent suggestions and ideas into interventions. One parent in an international school made a major contribution to her son's intervention by creating a tactile tray cover for his wheel chair in which the items were interchangeable. The CLDD team would like to see further research into the impact of family involvement in designing/modifying appropriate interventions for their child or young person with CLDD.

CONCLUSION

The overall response of schools to using the Engagement for Learning approach and the CLDD Engagement for Learning Resource Framework has been both positive and constructive in all three phases of the project – SEN development schools (12), SEN trial schools (65), mainstream schools (12) and early years settings (2). The result has been the CLDD Engagement for Learning Resource Framework.

The CLDD Engagement for Learning Resource Framework was designed to support educators of students with CLDD to engage them in learning. As can be seen from the preceding discussion, the responses from schools both in numeric data collected using the Engagement Profile and Scale, and during exit interviews, suggest that the research project has met its aim and objectives through provision of:

- Engagement Profile and Scale – implementation by educators has led to increased engagement in learning for students with CLDD, and to educator reports of associated learning and emotional wellbeing outcomes for students, as well as professional development/practice support for staff
- CLDD briefing packs – schools report that the packs about conditions commonly co-existing in students with CLDD have provided them with valuable information about students' conditions and related learning profiles as a first step towards personalising educational approaches for this student group; some schools intended to use them as training resources
- Inquiry Framework for Learning – schools have reported the usefulness of this resource in supporting personalising learning for students with CLDD, staff development, and the use of the Engagement Profile and Scale by providing inquiry prompts for discussion and investigation by class teams; other schools have identified it as a curriculum development tool
- Continuing training opportunities in use of the resources are provided through:
    - Online information at http://complexld.ssatrust.org.uk
    - A CLDD training programme developed through SSAT (further information at: http://complexld.ssatrust.org.uk), as stipulated in the tender
    - Inclusion in the TDA's forthcoming online professional development resources which will address professional development needs for educators of students with severe, profound and complex learning difficulties (see Appendix 7 for information sheet).

Educators who have successfully implemented the CLDD Engagement for Learning Resource Framework have formulated creative responses to the needs of their students, and developed high expectations of students' potential for engagement during the period of intervention. The focus on developing a personalised learning pathway for the student has led, even where the student's self-expression is impaired, to a confluence of curriculum delivery with students' learning strengths, needs, aspirations, interests and perspective to deliver a truly relevant and engaging educational programme for learners who were previously disengaged (in whole or in part) from learning. Sometimes working together with families and colleagues from other disciplines to deliver what their student needed, educators have been able to structure and visually represent progressive

engagement for learning using engagement indicators and scores, and develop an explanatory commentary which takes account of the introduction of new educational challenges.

The project has also highlighted key educational issues associated with students with CLDD taking part in this project, including:

- Co-existing mental health issues running at 150% of Emerson and Hatton's figure of 36% for children with special educational needs within a Phase 1 students with CLDD
- A possible association between implementing the CLDD engagement for learning approach and increasing emotional well-being among some learners
- Corroboration of the need, identified by the Government and the Salt Review, for professional development support for educators of students with CLDD, and the potential value of teaching assistants in supporting the implementation of the CLDD Engagement for Learning approach
- The potential of the CLDD Engagement for Learning resources to act as a student-centred professional coaching structure which supports professional alignment/consistency among class teams, and increasing autonomy, empowerment and analytical practice among the TA workforce
- The application to the mainstream CLDD student population of the continuing, well documented and as yet unmet concerns relating to post-school transition, held in common with many learning disability practitioners and families; this resonates with recent findings by Brooks[163] concerning mainstream students with ASD.
- The holistic, enriching and, occasionally, life-changing outcomes experienced by students with CLDD when professionals from multiple disciplines work together in a transdisciplinary way; and the value of this working for the professionals involved
- The potential and as yet unexplored impact of family involvement in designing/modifying interventions for their son/daughter with CLDD.

The CLDD research team urges the DfE to consider the recommendations arising from this research.

The CLDD Engagement for Learning Resource Framework was purposely designed on a foundation of inquiry to meet the dynamic and constantly changing needs of students with CLDD who enter our schools. Resources which advocate specific interventions alone are no longer able to meet the range of needs presented by the current population of students with CLDD, let alone the future one. It is hoped that the CLDD Engagement for Learning Resource Framework will be to educators what the fishing rod is to one who is hungry – it will feed them for life. Systematic and deductive inquiry is the way forward. We need schools and classrooms which, in acknowledging this, are practitioner-led, evidence-based, inquiry-focused and research-informed. Our work must be to transform children with CLDD into active learners, by releasing their motivation, unlocking their curiosity and increasing their participation.

Suggestions for future research

[163] Brooks, J. (2011) *'Mind the Gap!': Supporting high functioning ASC students transition to adulthood.* London: Advisory Service, Garratt Park School.

In summary, the CLDD research team would also like to see further opportunities for research which builds on the outcomes and findings of the current research into the CLDD Engagement for Learning Resource Framework in the following areas:

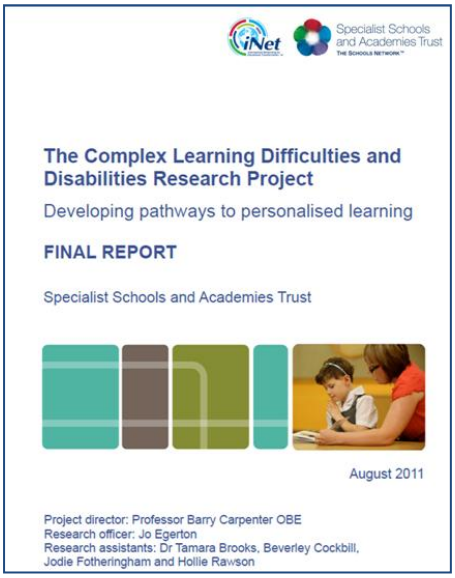
- A more wide-ranging and formal evaluation of the CLDD Engagement for Learning resources in their final form, subject to in-depth training of practitioner-researchers in the CLDD Engagement for Learning approach by the CLDD research team (ethos and practice), an extended baselining period prior to intervention, which the scope and timeframe for the research project did not allow, and continuing coaching of practitioners in implementing the approach
- Systematic monitoring of emotional wellbeing outcomes for students with CLDD as a result of implementing the CLDD Engagement for Learning approach
- A formal evaluation of the resources among early years settings, subject to the caveats above
- Use of the CLDD Engagement for Learning Resource Framework as a structure for coaching within the class team
- Explore the potential of the Inquiry Framework for Learning as a catalyst for curriculum development
- Transdisciplinary working in the context of implementing the CLDD Engagement for Learning resources, including family involvement in designing/modifying interventions for their son/daughter.

In the area of CLDD, to gain evidence about student performance it is necessary to go about a process of inquiry. From the corrupted/incomplete data in this study, it was obvious that some teachers were not confident in handling emerging evidence, interpreting that evidence in terms of student learning or of forming judgements about alternative pathways within a framework. There is a need for future professional development programmes to embody inquiry based processes through which educators can acquire the relevant skills to manage and implement evidenced based approaches to their maximum effect as a dynamic element of learning development for children with CLDD. The response of 25% of Phase 2 UK SEN schools to the Inquiry Framework for Learning is also further indication of an existing training need if inquiry is to be an embedded dynamic in classrooms. As one of the international schools headteachers stated about the Framework:

> *I used inquiry as a method of engaging the staff... The staff are very skilled and experienced. However, initially, they wanted answers, but by the end they were more comfortable with it being an inquiry. It enabled them to explore more.*

RECOMMENDATION 14

England has through this Department for Education commissioned research project defined and outlined the group of learners with Complex Learning Difficulties and Disabilities. This bedrock of research professional practice and student focused information needs to be nurtured disseminated and built upon. We recommend that the Government considers the most effective ways of doing this.



The Complex Learning Difficulties and Disabilities Research Project

Developing pathways to personalised learning

FINAL REPORT

Specialist Schools and Academies Trust

August 2011

Project director: Professor Barry Carpenter OBE
Research officer: Jo Egerton
Research assistants: Dr Tamara Brooks, Beverley Cockbill, Jodie Fotheringham and Hollie Rawson

Appendices

1. List of school participants
2. Student information form
3. Summary of student conditions
4. Exit interview schedules
5. Development school student case study overview
6. Engagement profile and scale
7. TDA SEN professional development resources – information sheet

APPENDIX 1: List of school participants

Abbey Hill School, Stockton-on-Tees
Alfreton Park School
All Saints CE School, Weymouth
Allenvale School, New Zealand
Applefields School, York
Arbour Vale School, Slough
Arohanui School, New Zealand
Bardwell School, Bicester
Beacon Hill School, Wallsend
Bettridge School, Cheltenham
Blackfriars School, Newcastle under Lyme
Bradfields School, Chatham
The Bridge School, Telford
Brookfields School, Reading
Castle Hill School, Huddersfield
Castle Tower School, Northern Ireland
CDC, Warstones School, Wolverhampton
Chadsgrove School, Bromsgrove
Christchurch CE Primary School, London
Colmers Farm Junior School, Birmingham
Concord School, Australia
Dawn House School, Rainworth
Downs View School, Brighton
Ellen Tinkham School, Exeter
Federation of Rosendale Primary School, London
Firwood School, Bolton
Fitzwaryn School, Wantage
Fosse Way School, Radstock
Garratt Park School, London
Gem Centre, Wolverhampton
George Hastwell School, Barrow-in-Furness
Gilbertstone Primary School, Birmingham
Haberdashers' Aske's Federation, London
Haybridge High School, Hagley
Highfield School, Wakefield
Highfurlong School, Blackpool
Holly Bank School, Mirfield
The Hub, Sanderson's Wynd School, Scotland
Ifield School, Gravesend
Jack Tizard School, London
James Rennie School, Carlisle Kilton
Lakeside School, Welwyn Garden City
Lancasterian School, Manchester
LaVoy Exceptional Centre, USA
The Manchester Health Academy
Mapledown School, London
Marshfields School, Peterborough
Mary Rose School, Southsea
Mayfield School, Whitehaven
Meath School, Ottershaw
Merstone School, Birmingham
The Milestone School, Gloucester
Modbury School, Australia
New Bridge School, Oldham
New Rush Hall School, Ilford
North Ridge School, Manchester
North Devonshire Personalised Learning Service
North West SILC, Leeds
Oak Field School, Nottingham
Oak Lodge School, East Finchley
Oakfield Park School, Pontefract
Orange Ridge Bullock School, USA
Parkside School, New Zealand
Patcham House School, Brighton
Patricia Avenue School, New Zealand
Percy Hedley School, Newcastle Upon Tyne
Phoenix Children's Resource Centre, Bromley
Phoenix School, London
Portfield School, Wales
Portland College, Sunderland
Priory Woods School, Middlesborough
Riverside School, Orpington

RNIB Rushton School, Coventry
Robin Hood School, Birmingham
Ross High School, Scotland
RSA Academy, Tipton
Severndale School, Shrewsbury
Sidney Stringer Academy, Coventry
Sir Charles Parsons School, Newcastle Upon Tyne
Spa School, London
Springhead School, Scarborough
St Gabriel's School, Ireland
St Luke's School, Scunthorpe
St Nicholas' School, Canterbury
St Vincent's School, Ireland
St Vincent's School, Liverpool
Tiverton Primary School, Birmingham
Tiverton School, Exeter
Tor View School, Haslingden
Watergate School, London
West Exeter School
West Gate School, Leicester
Westfield School, Bourne End
Wightwick Hall School, Wolverhampton
William Henry Smith School, Brighouse
Wilson School, New Zealand
Wolverhampton Special Needs Early Years Service

APPENDIX 2: Student information form

COMPLEX LEARNING DIFFICULTIES AND DISABILITIES RESEARCH PROJECT

Student information sheet (Please use to profile your case study students.)

SCHOOL NAME:			
Student's initials:	**Age:**	**Year group:**	**Key stage:**
Identified conditions/ needs (as articulated in SSEN/ professional reports)			
Professionals/agencies involved with the student on an on-going basis			

P/NC/other level – Maths/numeracy:

P/NC/other level – English/literacy:

P/NC/other level – ICT:

P/NC/other level – PSHE/C:

Are there successful or innovative strategies/ approaches in place with this student you would like to share with others?	
Which strategies/ approaches have not been successful with this student?	
Which issues would you like to resolve for this student?	

APPENDIX 3: Summary of student conditions

SUMMARY OF CONDITIONS AMONG STUDENT COHORT AS IDENTIFIED BY SCHOOLS / DOCUMENTARY EVIDENCE

SEN Development schools

Total number in student cohort for whom student information forms were completed: 60
Number of difficulties/disabilities listed for each student: 1–18

Learning difficulty/disability classification (9)	**Number of children**
Developmental learning disorder / Global developmental delay	17
Severe learning difficulties	17
Profound and multiple learning difficulties	7
Learning difficulties / 'Mental retardation'	5
Cognitive delay	2
Moderate learning difficulties	2
Multiple learning difficulties	1
Specific conditions / disorders - not rare (6)	
Autistic spectrum disorder	13
Attention deficit / hyperactivity disorder	8
Fetal alcohol spectrum disorder (1 diagnosed; 2 unconfirmed)	3
Fragile X syndrome	1
Tourette's syndrome	1
'Undiagnosed disability'	1
Rare conditions/chromosomal disorders (18)	
Peters Plus Syndrome	2
Tuberous sclerosis	2
2 q chromosome deletion	1
14q chromosome deletion	1
Angelman's Syndrome	1
Alpha Thalassaemia / ATR-X	1
Cornelia de Lange Syndrome	1
DiGeorge Syndrome	1
Ehlers-Danlos Syndrome type 4	1
Fetal Valproate Syndrome	1

Heller's Syndrome	1
Landau Klefner Syndrome	1
Lennox-Gastaut Syndrome	1
Moebius Syndrome	1
Mowat-Wilson Syndrome	1
Patau Syndrome	1
Pelizaeus-Merzbacher Disease	1
Non-specific chromosomal abnormality	1
Physical / medical conditions (31)	
Epilepsy	23
Motor difficulties (fine: 15; gross: 13; mobility: 12)	18
Visual impairments	17
Cerebral palsy	14
Physical difficulties	7
Gastrostomy	7
Hearing impairment / sensorineural hearing loss	6
Severe medical difficulties	5
Asthma	4
Dyspraxia (oral / generalised)	3
Microcephaly	3
Eczema	3
Gastro-oesophageal reflux	3
Cleft palate	2
Dystonia	2
Hydrocephaly	2
Hypotonia	2
Acquired brain injury (severe)	1
Afebrile convulsions	1
Dyskinetic congenital hypothyroidism	1
Heart murmur	1
Hyperparathyroidism	1
Limb length discrepancy	1
Migrational cell deficiency	1
Neurological disorder (unidentified)	1
Periventricular leukomalacia	1
Prematurity	1

Prenatal stroke	1
Short limb dwarfism	1
Spine curvature (abnormal)	1
Streptococcal meningitis	1
Other: developmental / processing / social and emotional wellbeing difficulties (19)	
SLCN (expressive language delay: 14; receptive language delay: 14; SLCN: 16 SLI: 3)	26
BESD/SEBD (12); Challenging behaviour / behavioural difficulties (6); self-injurious behaviour: (1)	17
Self-help and independence skills delay	11
Learning and concentration difficulties	9
Social interaction / play skills delay	8
Low self-esteem	8
Sensory processing difficulties	6
Auditory phonetic processing and storing difficulties	4
Attachment disorders	3
Dyslexia / dyslexic profile	3
High anxiety	3
Obsessive compulsive disorder	3
Mental health issues	2
Phonological disorder	2
Significant retrieval problems	2
Hyperacusis	1
Oppositional defiant disorder	1
Pervasive developmental disorder	1
Specific learning difficulty	1

SUMMARY OF CONDITIONS AMONG STUDENT COHORT AS IDENTIFIED BY SCHOOLS

SEN UK trial schools

Total number in student cohort for whom student information forms were completed: 96
Number of difficulties/disabilities listed for each student: 1–16

Learning difficulty/disability classification (7)	**Number of children**
Severe learning difficulties	23
Global developmental delay	21
Profound and multiple learning difficulties	9
Moderate learning difficulties	6
Cognitive delay	3
Complex learning needs	2
Neurodevelopmental delay	1
Pervasive developmental disorder	1
Specific conditions / disorders- not rare (7)	
Autistic spectrum disorder (+1 suspected)	28 (+1)
Attention deficit / hyperactivity disorder / ADD (+1 suspected)	11 (+1)
Down syndrome	11
Fetal alcohol syndrome (+1 suspected)	2 (+1)
Brain trauma at birth	2
Substance effects (+1 suspected)	(+1)
'Undiagnosed disability'	1
Rare conditions/chromosomal disorders (11)	
Phelan McDermid syndrome	2
1p36 deletion	1
Angelmann's syndrome	1
Chromosome 7 rearrangement	1
Infantile refsum syndrome	1
Laurence-Moon-Bardet-Biedl Syndrome	1
Mosaic X syndrome	1
Proteus syndrome	1
Rett syndrome	1
Williams syndrome	1
Wolf-Hirschhom syndrome (Chr 4 part del)	1

Physical / medical conditions (45)	
Epilepsy / seizures	29
Visual impairment	29
Cerebral palsy	20
Motor impairment	9
Physical difficulties	8
Hearing impairment	6
Prematurity	5
Hydrocephalus	4
Gastrostomy	4
Heart defects	4
Multisensory impairment	4
Birth trauma	3
Congenital heart defect	3
Gastro-oesophageal reflux	3
Microcephaly	3
Sleep disorder / issues	3
Asthma	2
Feeding difficulties	2
Hypotonia	2
Lung disease	2
Spine curvature (abnormal)	2
Ataxia	1
Bilateral schizenciphaly	1
Brittle bone disease	1
Cerebral atrophy	1
Corpus callosum absence	1
Diabetes	1
Duodenal atresia	1
Encephalitis	1
Eczema	1
Growth issues	1
High blood pressure	1
Holoproscencephaly with panhypopituitarism	1
Megalancephaly / hemi	1
Migraines	1
Oral pharangeal dysphagia	1
Perinatal hypoxic encephalopathy	1
Pulmonary hypotension	1

Quadriparesis	1
Quadrilateral amputee	1
Stroke	1
Talipes bilateral	1
Thoracic kyphosis	1
Tics	1
Ulcers	1
Other: developmental / processing / social and emotional wellbeing difficulties (18)	
SLCN: 16; expressive language difficulties: 7; receptive language difficulties: 7; speech delay: 1	37
BESD/SEBD	14
Sensory processing/integration difficulties	10
Social interaction / play skills delay	8
Communication – non verbal	7
Self-help and personal care difficulties	7
Attention and concentration difficulties	5
Attachment disorder	3
Obsessive compulsive disorder (+ 2 suspected)	1 (+2)
Self-esteem issues	3
Child wellbeing issues	1
Communication - EAL	1
Elective mutism	1
Hyperactivity	1
Mental health issues	1
Oppositional defiant disorder	1
Pervasive developmental disorder	1
Sexualised behaviour	1

SUMMARY OF CONDITIONS AMONG STUDENT COHORT AS IDENTIFIED BY SCHOOLS

International SEN trial schools

Total number in student cohort for whom student information forms were completed: 31
Number of difficulties/disabilities listed for each student: 1–17

Learning difficulty/disability classification (5)	**Number of children**
Global developmental delay	10
Intellectual disability	10
Severe learning difficulties	4
Moderate learning difficulties	2
Profound and multiple learning difficulties	1
Specific conditions / disorders- not rare (3)	
Autistic spectrum disorder	8
Attention deficit / hyperactivity disorder / ADD	2
Down syndrome	1
Rare conditions/chromosomal disorders (7)	
Alpha Thalassemia (ATR-X)	1
Batten disease	1
IDC 15 chromosome disorder	1
Mosaic X syndrome	1
Ring chromosome 13	1
Trisomy 18 disorder	1
Unspecified chromosome abnormality	1
Wolf-Hirschhom syndrome (Chr 4 part del)	1
Physical / medical conditions (31)	
Visual impairment	13
Epilepsy / seizures	8
Prematurity	6
Gastrostomy	5
Motor impairment	5
Cerebral atrophy	4
Cerebral palsy	4
Gastro-oesophageal reflux	4
Hearing impairment	4
Microcephaly	4
Sleep disorder / issues	3

Spine issues (e.g. curvature / fuse)	3
Feeding difficulties	2
Hydrocephalus	2
Lung disease	2
Physical difficulties	2
Asthma	1
Circulatory problems	1
Corpus calosum aegenesis	1
Foot deformity	1
Hernia	1
Hip dislocation	1
Hydropspadis	1
Hypoxic brain injury	1
Migraines	1
Multisensory impairment	1
Periventricular leucomalacia	1
Poor muscle tone	1
Pulmonary hypotension	1
Respiratory tract infections	1
Quadrilateral amputation	1
Thalmic bleed	1
Tics	1
Other: developmental / processing / social and emotional wellbeing difficulties (8)	
Self-help and personal care difficulties	8
SLCN: 8; expressive language difficulties: 1; receptive language difficulties: 1; speech delay: 1	8
BESD/SEBD	5
Attention and concentration difficulties	3
Social interaction / play skills delay	3
Obsessive compulsive disorder	1
Sensory processing/integration difficulties	1
Social anxiety	1

SUMMARY OF CONDITIONS AMONG STUDENT COHORT AS IDENTIFIED BY SCHOOLS

Mainstream/early years trial schools

Total number in student cohort for whom student information forms were completed: 25
Number of difficulties/disabilities listed for each student: 1–9

Learning difficulty/disability classification (2)	**Number of children**
Developmental learning disorder / Global developmental delay	3
Moderate learning difficulties	2
Specific conditions / disorders - not rare (8)	
Autistic spectrum disorder (+ 2 unconfirmed)	5 (+2)
Asperger syndrome	4
Attention deficit / hyperactivity disorder	6
Fetal alcohol spectrum disorder (1 unconfirmed)	(1)
Fragile X syndrome	1
Hyperkinetic disorder	1
Tourette's syndrome	1
'Undiagnosed disability'	2
Rare conditions/chromosomal disorders (0)	
Physical / medical conditions (11)	
Cerebral palsy	3
Motor difficulties (fine: 3; gross: 3)	3
Visual impairments	2
Feeding difficulties	2
Hearing impairment / sensorineural hearing loss	2
Hydrocephaly	2
Balance disorder	1
Brittle bones	1
Prematurity	1
Shunt	1
Streptococcal meningitis	1
Other: developmental / processing / social and emotional wellbeing difficulties (17)	
SLCN (6) / communication difficulties (8) (expressive language delay: 1; receptive language delay: 2)	14

Social interaction difficulties	5
Attachment disorders	3
Attention and concentration difficulties (not ADHD)	2
BESD/SEBD	2
English as another language	2
Mental health issues	2
Generalisation of skills difficulties	2
Sensory processing difficulties	2
Specific learning difficulties	2
Cognition difficulties	1
Low self-esteem	1
Obsessive compulsive disorder	1
Pica	1
Regression in skills	1
Retention difficulties	1
Spatial difficulties	1

APPENDIX 4: Exit interview schedules

Complex Learning Difficulties and Disabilities Research Project: Delivering meaningful pathways to personalised learning

EVERY CHILD MATTERS

EXIT INTERVIEW SCHEDULE

FOR DEVELOPMENT SCHOOLS (Teachers / TAs)

Interviewee names:	**Date of interview**
School:	**Time interview began:**
	Time interview ended:
Interview recorded: YES / NO	**Interviewer:**

Introduction

- *Brief describe questionnaire and purpose*
  - *Trying to gather information about [N.] from different people who support their learning*
  - *Interview will take 20-30 minutes approx.*
  - *Brief overview of questions so they know what's coming.*
- *TRs will be sent a copy of notes made from the interview which they can change or amend*
- *During the interview, if they would like something explained more clearly please say so.*

EVERY CHILD MATTERS

EXIT INTERVIEW SCHEDULE FOR DEVELOPMENT SCHOOLS (Teachers / TAs)

1. What do you feel about the concept of engagement as an approach to developing personalised learning pathways?

2. How would you rate the usefulness of

(a) the engagement profile & scale				
1 *Not at all*	2	3	4	5 *Extremely*
What are your reasons?				
(b) the briefing sheets				
1 *Not at all*	2	3	4	5 *Extremely*
What are your reasons?				
(c) the inquiry framework?				
1 *Not at all*	2	**3**	4	5 *Extremely*
What are your reasons?				

3. How do you feel about the place of the engagement approach in your future practice? *Will your school continue to use any of the project tools? And if so, how?*

4. What is the key thing for you that you will take away from this project?

5. What would be the one piece of advice you would give to another school about using the engagement approach?

6. Is there anything else you would like to say about the project?

7. Is there anything important that you think the interview has not covered?

8. Have you anything else you would like to ask about the interview or the wider project?

9. May I come back to you about any points that need clarifying?

Additional questions to above for SEN trial schools interview schedule

- What did you feel about the usefulness of the key indicators for your student?
- Describe the most successful outcome for each of the students in the project.
- *Additional prompt to 'Future practice' question:*
  How do you see the role of TAs in the engagement approach?

Additional questions to all above for the mainstream trial schools interview schedule

- How did you manage any issues you encountered?
  Indicator overlap, time, staffing...
- *Prompt re TAs not given*

Additional questions to all above for the early years trial schools interview schedule

Relating to Early Years Foundation Stage:

- How does the project tools facilitate your implementation of continuous and enhanced provision?
- How do the tools enhance the look, listen and note section of the EYFS framework?
- How could you use the tools to fulfill the 'sharing information with other settings' criteria of the EYFS framework?

APPENDIX 5: Development school student case study overview

NAME	Simon C.
SCHOOL	Community special school
AGE	7 years 2 months
DIAGNOSES	Moebius Syndrome Hellers Syndrome
PROFESSIONALS INVOLVED	Clinical Psychologist Educational Psychologist Consultant Paediatrician Speech and Language Therapist Paediatric Gastroenterologist
NATIONAL CURRICULUM LEVELS	Math's – Varies between – P1 (ii) & P3 (i) English – varies between P1 (ii) & P4 Science – P4 IT – P5 PSHCE – 4

Introduction

Simon is a 7 year old boy diagnosed with Moebius Syndrome. It is a rare disorder typically affecting the sixth and seventh cranial nerve that affects Simon's facial muscles, especially his upper lip which is stiff. In December 2008, he was diagnosed with Heller's Syndrome, also known as Cognitive Disintegration Disorder (CDD); Heller's syndrome causes skills to be lost. He has had abdominal surgery to remove an obstruction and still may have times when he feels uncomfortable; periodically, his abdomen becomes distended. Although not diagnosed with epilepsy, there are times when Simon appears to have absences and/or stare into space. Simon cannot frown or smile and has other associated physical problems such as poor peripheral vision and difficulty articulating words. Some time ago, Simon became anxious and unwell, experiencing night terrors and hallucinations.

Due to his anxieties and agitation Simon was unable to continue at his previous local mainstream school as he was unable to function within the classroom. Simon now attends a community special school. Since starting his new school, Simon has demonstrated an ability to respond to and instigate interactions. Simon is able to speak clearly, but at times will become agitated and will 'chunter' in a way which is difficult to understand. Simon finds it difficult to focus for any length of time, and there are times when it is impossible to get his attention. He can refuse to cooperate, and finds it difficult to sit for short periods. In the past Simon had two special friends, but since his illness Simon has not shown any interest in interacting with old friends. Simon likes colouring and play dough, but shows little interest in classroom toys. Food is a high interest, and he may grab food from other children. It is not clear what knowledge and skills Simon has retained from before his illness, and what his capacity for learning is. His mother is keen for him to regain his reading/writing and number work. The teacher had tried to accomplish this, but had not known how to re-engage Simon in learning.

Simon was selected for the CLDD research project due to the complexity of his needs, behaviours and learning difficulties predominately associated with the unpredictability of his memory. His lack of communication and understanding of daily routines are at times confounding. The aim of the CLDD Research Project intervention was for Simon to complete two activities independently within a

structured teaching system, as the teacher wanted him to be able to achieve and gain some independence even on days when he was more affected by his CDD.

According to Simon's teacher the three key things preventing Simon from fulfilling his learning potential were:

- Variable cognitive ability
- Variable ability to recall information from long term memory
- Lack of ability to give feedback through facial expression.

Statement of special educational need objectives

Educational

- To improve his concentration & attention skills
- Further develop Simon's thinking, reasoning and learning skills

Communication

- Develop effective and efficient communication

Personal, social and emotional

- Develop strategies to manage any anxieties or frustration
- Be able to play amicably with peers, demonstrating regard for the need and views of others
- Develop Simon's ability and confidence in the areas of self care and independence

Physical, sensory and medical

None

Intervention agreed

It was discovered that although Simon appeared to understand his structured teaching environment, he was not gaining information from the symbol prompts on his schedule, and was likely to be imitating his peers. Therefore the first step towards independent working within the teaching structure for Simon was to establish a cue system that he understood. Through observation, it was apparent that Simon understood objects of reference, but that symbols were not meaningful to him. This shocked Simon's class team, as his mother had stated, and previous school records showed, that Simon had been able to write short sentences and add and subtract to 20 less than a year ago. It was therefore agreed to replace symbol cues with objects of reference cues. In doing so, Simon's teacher also considered his diagnosis and his changeable learning profile; one day he would confidently complete a task, but the next day he would struggle having lost access to his long term memory. He needed a cue system that he could access confidently at all times.

The next step was then to design activities for Simon which, again, were accessible to him whether he was having a 'good' or 'bad' day so he could achieve and feel that was participating at all times.

Engagement Profile

Using the Engagement Profile and Scale, a high-engagement profile was drawn up for Simon by observing him involved in a high interest activity of building stickle bricks at the group table. Having a record of high engagement behaviours for Simon, allowed all teaching staff to recognise the level of engagement that Simon could show in tasks/activities/lessons.

Awareness: Simon looked at the items used in the task, and picked up the pieces in front of him.

Curiosity: Simon picked up the stickle bricks and orientated them in different ways.

Investigation: Simon stuck the pieces together in different ways: on top of each other/onto the baseboard; he picked up pieces of the same colour and laid them in parallel.

Discovery: Simon found there was not enough room to place all the pieces in the way he wanted so he took some off and tried different ways to get them all to fit.

Anticipation: Simon seemed to anticipate the long thin pieces were good for standing on their ends on the board.

Initiation: Simon picked up pieces and immediately starting exploring them.

Persistence: Simon carried on placing the pieces until he was satisfied, sometimes taking off pieces he had placed and starting all over again; when pieces were difficult to fit on the board he kept trying.

Engagement Scale

Simon's teacher applied the information from the above Profile to the intervention in place for one-to-one teaching. A series of interventions were introduced, and monitored using the Engagement Profile and Scale. The interventions were videoed, and the videos later reviewed so that the outcomes could be assessed and the intervention subsequently modified. Two Engagement Scales were completed in most weeks. Tables' 1a/b and Figure 1 describe Simon's engagement outcomes across pre- and post-intervention periods. Below are descriptions of the series of interventions; the numbers correspond to the Engagement Profile and Scale data below.

Intervention 1:

Separate teaching room adjacent to the classroom was set up with one-to-one support to enable Simon to focus while being taught a new task without distraction from a noisy environment or his peers. The teaching table was structured for Simon to work from left to right. There were two trays to his left each containing a two-dimensional task, and two chairs one for Simon and one for the teacher. This environment and structure gave Simon clues as to what was to follow.

Intervention 2:

Simon was unsure which tray to take first. The trays needed additional visual clarity to enable Simon to complete tasks without any prompting from the teacher.

Intervention 3:

Simon was distracted by other objects around the room, so the room was decluttered as far as possible.

Intervention 4:

The teacher explored different ways of positioning the instructions for the task in each tray. This was unsuccessful for Simon, and she decided to return to the original position for the instructions.

Intervention 5:
Objects of reference were used to transition Simon to the teaching room as the symbol was not meaningful to him.

Intervention 6:
New trays were introduced but their orientation was unsuitable for the tasks developed. The original trays were reintroduced.

Intervention 7:
Simon was becoming distracted by the objects of reference used to cue his transition to the teaching room; so a receptacle was provided so that he could post the objects of reference on his arrival in the room.

Intervention 8:
When the trays were completed Simon was unsure if he had finished the task. A 'finish' box was introduced to Simon's right so he could place his trays in it once the task was completed.

Intervention 9:
The laminated example of the task was laid flat on the jig to help Simon get the correct orientation for the task.

Intervention 10:
A three-dimensional element was introduced using Duplo bricks, but Simon needed additional visual information on how to build them.

Intervention 11:
The teacher moved to the periphery of the room to enable Simon to complete the task with reduced prompt.

Engagement data

Baseline observations sessions 1, 2 & 3; Engagement Scale session 4 data for Simon

Session no.	BASELINE		OBSERVATION SUMMARY
	DATE	SCORE	
1	10/3/10 AM		Retrospective analysis of a successful free time session playing independently with stickle bricks. The teacher wanted to do a 1.1 activity with Simon but was cautious of asking Simon to put the stickle bricks away in order for him to move on to the next activity. Simon was able to build but needed some form of structure as he didn't know what to do once he had built a tower therefore the building became repetitive and not meaningful.
2	10.3.10 PM		Retrospective analysis of a food technology lesson. Simon was calm; anxieties appeared low. Apart from stirring which he enjoyed, Simon was focused on eating rather than making meringues. Not engaged with measures and outcomes. Not interacting with peers. Needed a high level of support. **Action points:** Expectations re: sitting and being attentive to high; Symbols meaningless to Simon even though he appears to understand; timer to be used to inform Simon when his time stirring had finished. Count down system to inform Simon when

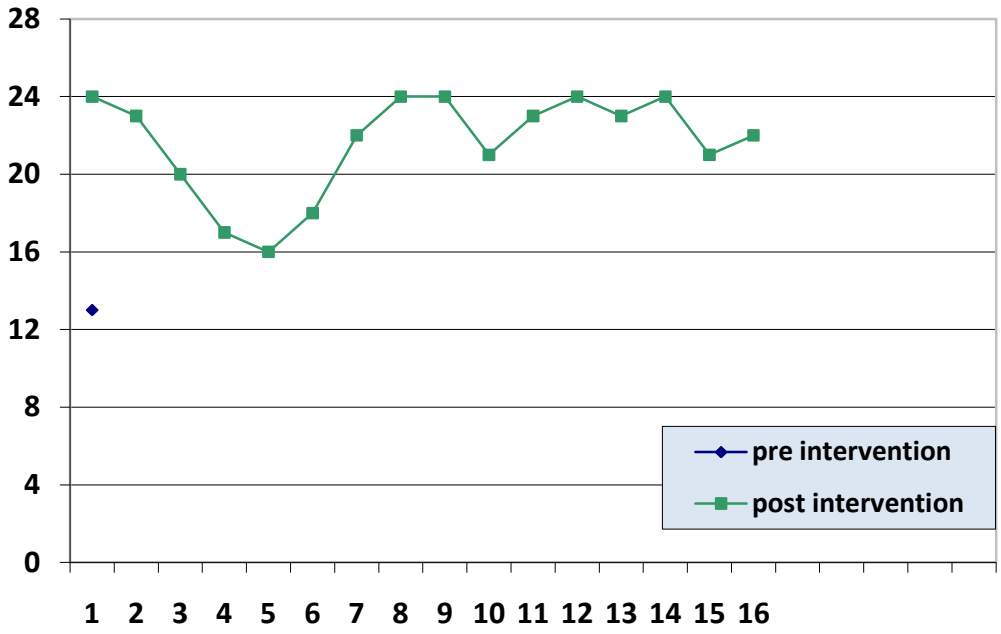
			the activity will finish;.
3	30.3.10		Retrospective analysis of a successful of a snack time. Calm, focused, waiting for his turn and appearing to listen to what was said. Noisy. **Action points:** Simon did not appear to have the full understanding of the PECS strip or symbols. He had observed his peers therefore and copied them. More processing time needed.
4	30/3/10	13	Pattern making activity in one-to-one teaching room. Activity indicated verbally, through symbol and resources (crayons). He was guided what to do by the teacher and to copy the pattern. Completed the task with a high level of support. **Action points:** Simon did not appear to understand symbol, but picked up on crayons; reduce level of support from teacher; more structure needed so task is meaningful for Simon. The teacher would like to continue this task with the anticipation of Simon being able to do it independently.

Post-intervention Engagement Scale data for Simon

Session no.	POST-INTERVENTION		OBSERVATION SUMMARY
	DATE	SCORE	
1	17/5/10	24	Retrospective analysis of a more successful tray task (tray with a photograph of a pattern prototype and 2D shapes). Interventions 1, 2 & 3 have improved due to changes in environment stimulus and using visual clarity within the trays.
2	18/5/10	23	Retrospective analysis of tray task - interventions 1, 2, 3 & 4. Changed the position of instruction inside the tray. Explored how shapes stacked Needed prompting with second task.
3	24/5/10	20	Retrospective analysis of next tray task – interventions 1, 2, 3 & 4. Simon seemed less aware. Maybe aware that the video had stopped– was staring at Liz (TA taking video).
4	7/6/10	17	Tray task - interventions 1, 2, 3 & 4 & 5. Object of reference used (bundle of crayons). The position to place it had been moved to the right hand side of table. Simon had difficulty releasing his object and kept going back to it. He was raising and rolling his eyes.
5	8/6/10	16	Tray task - interventions 1, 2, 3, 4 & 5. Not really in right emotional state to work, needed prompts.
6	9/6/10	18	Tray task - interventions 1, 2, 3, 4, 5 & 6. Another new 2nd tray used.
7	14/6/10	22	Tray task - interventions 1, 2, 3, 4, 5, 6, & 7. Post objects of reference to reduce distraction. Simon singing to self all the way through the session. Was aware of the task.
8	15/6/10	24	Tray task - interventions 1, 2, 3, 4, 5, 6 & 7. Started 2nd tray. Seemed aware he had completed it.
9	16/6/10	24	Tray task - interventions 1, 2, 3, 4, 5, 6 & 7. Simon singing to self all the way through the session. Was aware of the task
10	21/6/10	21	Tray task - interventions 1, 2, 3, 4, 5, 6 & 7. Next time will try a large finish tray to put the work trays in. Simon did verbalise 'finished' in imitation of the teacher at the end of the session.
11	22/6/10	23	Tray task - interventions 1, 2, 3, 4, 5, 6 & 7. Prompted to put finished tray in new finished box. (Can't currently find a box that's deep enough to contain work trays with their small containers on the side)

12	23/6/10	24	Tray task - interventions 1, 2, 3, 4, 5, 6, 7 & 8. Simon used all the pieces of Duplo. Pushed Duplo bricks together until they held.
13	28/6/10	23	Tray task - interventions 1, 2, 3, 4, 5, 6, 7 & 8. Next time will lay the laminated example flat on the jig to help Simon get the correct orientation
14	29/6/10	24	Tray task - interventions 1, 2, 3, 4, 5, 6, 7, 8, 9 & 10. Lay the laminated example flat on the jig to help Simon get the correct orientation. Finished making Duplo tower. When finished 2nd tray only needed a gestural prompt and Simon put the tray into the finished box.
15	5/7/10	21	Tray task - interventions 1, 2, 3, 4, 5, 6, 7, 8, 9 & 10. When used up large bricks, realized other bricks were smaller and started to build with them. When not sure what to do next, despite gestural prompt. Put tray away in finish box – first time he had put anything away unprompted in this box.
16	6/7/10	22	Tray task - interventions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11. Teacher moved onto the periphery to reduce prompting.

Engagement scale graph for Simon C. for pre- and post-intervention communication



Explanation

In one-to-one teaching time, as a result of the implementations being put in place, Simon's engagement score (calculated retrospectively) had jumped from 13 to 22 as a result of introducing the eleven interventions described above. He began to show confidence and independence in his ability. Simon was able to communicate more effectively with objects of reference and was working towards independently completing a task with visual structure to guide him.

When Intervention 1 (environment and structure) was applied in the one-to-one session, Simon showed an instant level of engagement from fleeting engagement towards sustained engagement. All other interventions used were effective, but no one above another. The teacher realised that by identifying the correct form of communication, reducing the verbal input, allowing processing time and accepting

that some days Simon would be unable to do some work due to his condition, Simon would be enabled to communicate effectively and achieve independent work during some of the school day.

Conclusion

This particular case study has worked for this student because of the teacher's responsive open minded acceptance of a tool that may enable a child to work towards goals of engagement to learning.

Through reflecting on the student, with the aid of video and advice from the researcher, the teacher concluded that the communication the student used was not meaningful; he required additional visual and physical structure compared to his peers; he needed a quieter environment to learn new tasks; processing time needed to be allowed; and some days, due to his disability, he was not coherent enough to work academically.

Outcomes were beneficial due to the teacher's input and enthusiasm throughout the research. Through this intervention it became clear that the student at times looked scared, as at times the world was very confusing to him. Through the strategies implemented, he should now be able to transition to a quite space with the knowledge that it is his area where he can work independently on a simple task and feel satisfaction once he has completed it. These strategies had the potential to be successfully transferred to a variety of lessons in which the student struggles to engage. The student became aware of a communication that was meaningful to him; the structured tasks enabled him to achieve which gave him renewed confidence, and the physical boundaries enabled him to feel safe. The impact has been substantial to the students' engagement to learning throughout the school day.

APPENDIX 5: Engagement Profile and Scale

The special schools / early years version of the Engagement Profile and Scale is below.

The mainstream version replaces the indicator 'Awareness' with 'Responsiveness' and contains mainstream student examples. It is available on the project website: http://complexld.ssatrust.org.uk.

The COMPLEX LEARNING DIFFICULTIES AND DISABILITIES Research Project:
Developing meaningful pathways to personalised learning

SPECIAL SCHOOL / EARLY YEARS

Engagement Profile and Scale

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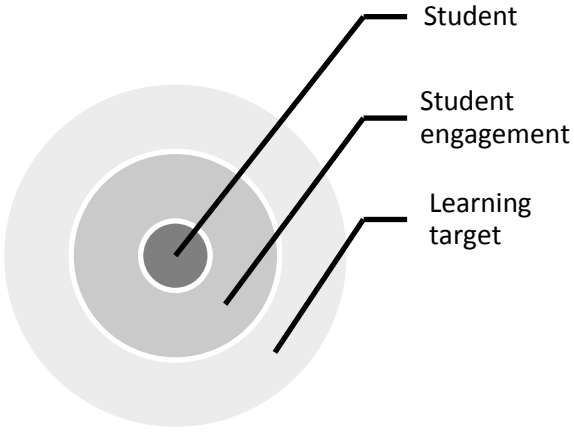
Definitions

Complex learning difficulties and disabilities

Children and young people with Complex Learning Difficulties and Disabilities (CLDD) have conditions that co-exist. These conditions overlap and interlock creating a complex profile. The co-occurring and compounding nature of complex learning difficulties requires a personalised learning pathway that recognises children and young people's unique and changing learning patterns. Children and young people with CLDD present with a range of issues and combination of layered needs – e.g. mental health, relationships, behavioural, physical, medical, sensory, communication and cognitive. They need informed specific support and strategies which may include transdisciplinary input to engage effectively in the learning process and to participate actively in classroom activities and the wider community. Their attainments may be inconsistent, presenting an atypical or uneven profile. In the school setting, learners may be working at any educational level, including the National Curriculum and P scales. This definition could also be applicable to learners in Early Years and post-school settings.

Engagement
(working definition)

Sustainable learning can occur only when there is meaningful engagement. The process of engagement is a journey which connects a child and their environment (including people, ideas, materials and concepts) to enable learning and achievement.



What is the Engagement Profile & Scale?

Engagement is the single best predictor of successful learning for children with learning disabilities (Iovannone et al., 2003). Without engagement, there is no deep learning (Hargreaves, 2006), effective teaching, meaningful outcome, real attainment or quality progress (Carpenter, 2010).

The Engagement Profile and Scale is a classroom tool developed through SSAT's research into effective teaching and learning for children with complex learning difficulties and disabilities. It allows educators to focus on the child's engagement as a learner and create personalised learning pathways. It prompts student-centred reflection on how to increase the learner's engagement leading to deep learning.

Engagement is multi-dimensional, and encompasses awareness, curiosity, investigation, discovery, anticipation, persistence and initiation. By focusing on these seven indicators of engagement, educators can ask themselves questions such as: „How can I change the learning activity to stimulate Robert's curiosity?' 'What can I change about this experience to encourage Shannon to persist?'

The adaptations made and the effect on the student's level of engagement can be recorded, together with a score on the engagement scale. Over time, it is possible to chart the success of interventions and adjustments, and the effect this has had on the student's levels of engagement.

In situations where the student does not currently engage with any learning activity, the Engagement Profile can be used to structure an informal assessment of the kinds of activities the student does engage with constructively. The findings can be used to indicate starting points from which to engage the student in learning.

How to complete the Engagement Profile

- Choose a task/activity/lesson with which the student engages highly; this does not need to be classroom based.
  This profile will show you how the student demonstrates high engagement.

- Use the definitions provided in the engagement definition chart to consider how the student demonstrates each of the indicators within this task/activity/lesson**.**
  Try to think broadly.

- It does not matter in which order the scale is completed, the indicators are not hierarchical.

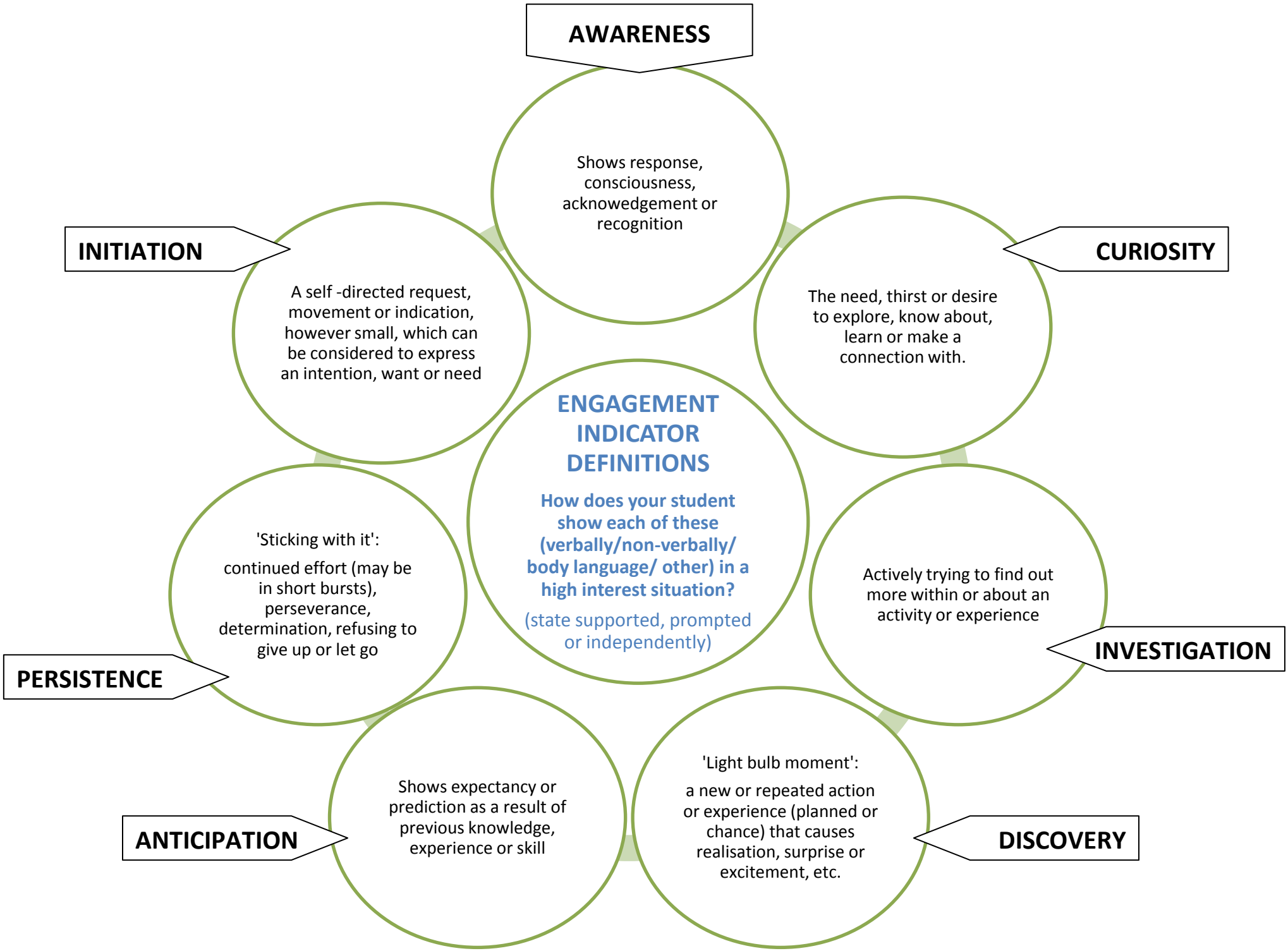
- It will be helpful to seek the opinions of other people who know the student well, (e.g. families and colleagues from education and other professions) so that a shared interpretation of the learner's responses is gained.

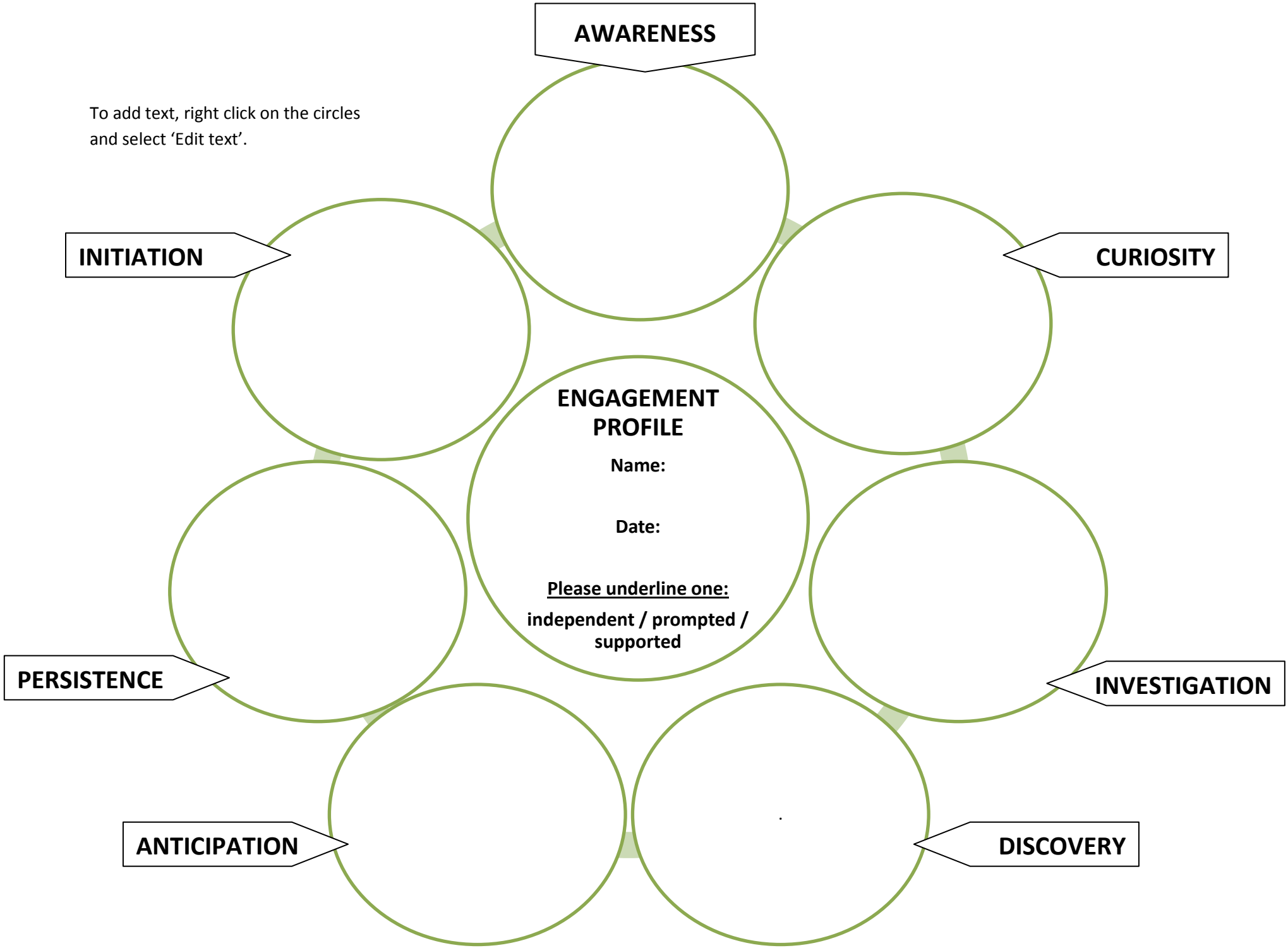
- This is not a static document and should be added to and altered as and when you feel necessary.

- The engagement profile does not need to be completed for every learning session, but can be updated as additional behaviours are noted in relation to the engagement indicators.

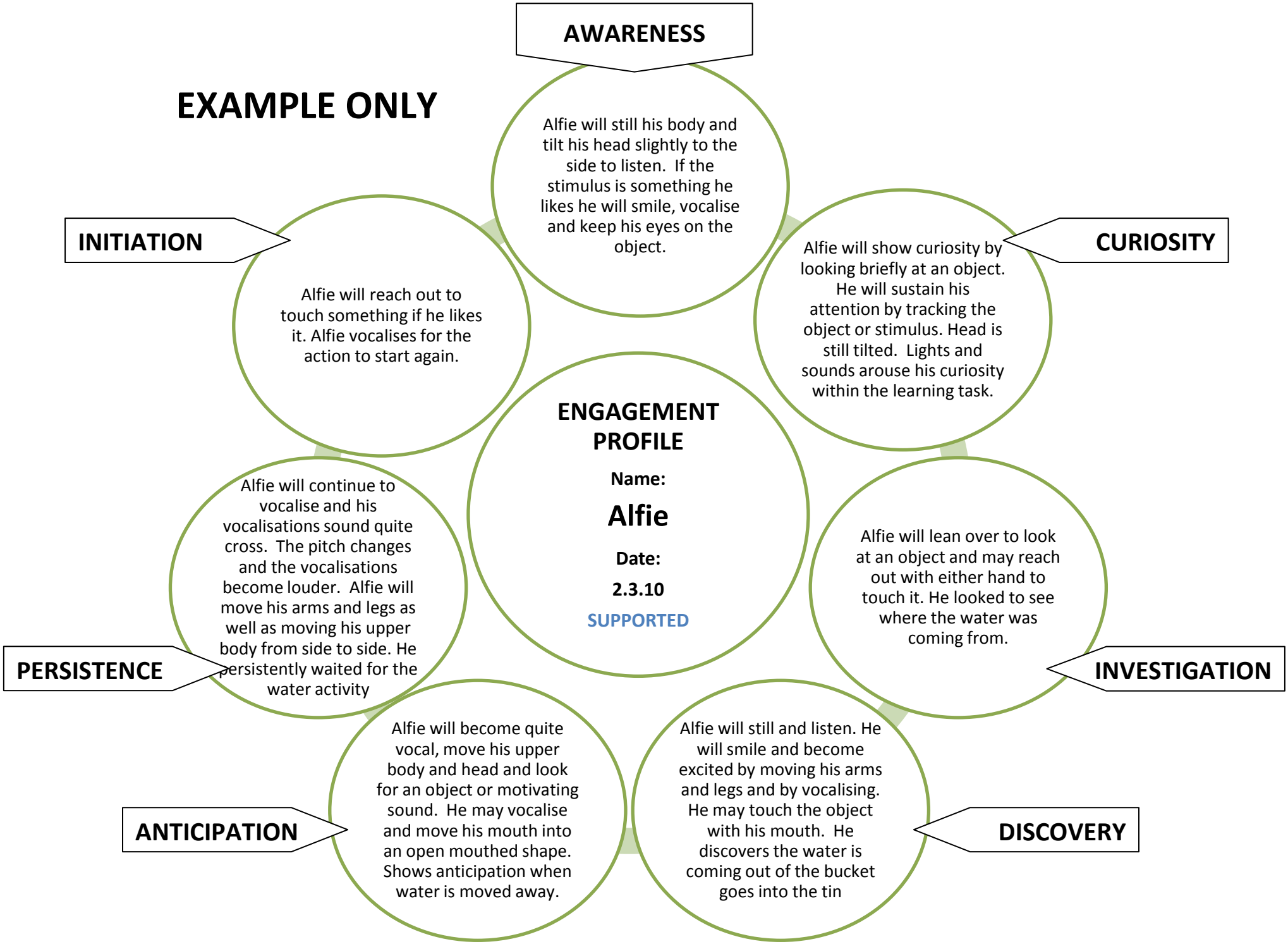
- Refer back to the profile when completing and scoring the engagement scale to help you, but also to provide some consistency between raters and between scales and activities.

- The engagement profile also allows educators to know the levels of engagement that the student can achieve so they can have high expectations for them in relation to the different indicators of engagement.


AWARENESS
Shows response, consciousness, acknowledgement or recognition
INITIATION
A self -directed request, movement or indication, however small, which can be considered to express an intention, want or need
CURIOSITY
The need, thirst or desire to explore, know about, learn or make a connection with.
ENGAGEMENT INDICATOR DEFINITIONS
How does your student show each of these (verbally/non-verbally/ body language/ other) in a high interest situation?
(state supported, prompted or independently)
'Sticking with it':
continued effort (may be in short bursts), perseverance, determination, refusing to give up or let go
PERSISTENCE
Actively trying to find out more within or about an activity or experience
INVESTIGATION
ANTICIPATION
Shows expectancy or prediction as a result of previous knowledge, experience or skill
'Light bulb moment':
a new or repeated action or experience (planned or chance) that causes realisation, surprise or excitement, etc.
DISCOVERY


AWARENESS
To add text, right click on the circles and select 'Edit text'.
INITIATION
CURIOSITY
ENGAGEMENT PROFILE
Name:
Date:
Please underline one:
independent / prompted / supported
PERSISTENCE
INVESTIGATION
ANTICIPATION
DISCOVERY

EXAMPLE ONLY



How to complete the Engagement Scale

- Select an activity for which the student has a low engagement that you want to increase.
- Complete details on front sheet.
  This is to make sure there is an accurate record of what the target and task are, and the date and time so you can compare levels of engagement over time.
- Complete the „Overview of relevant issues' and „What strategies…' boxes.
  This space enables you to note anything which might affect the engagement score (e.g. distressing social situation, lack of sleep, etc.).
- Refer to the profile when completing the scale.
  It will help you rate what you have seen, and will also provide consistency between the different people who use the scale so a fair comparison can be made.
- Rate each of the indicators from 0–4 (see description of scoring on next page) and add your rating to the „Scores' column.
  Think broadly when completing the scale. Observe what the learner is doing rather than what you expect them to be doing.
- Remember that it does not matter in which order the scale is completed.
  The indicators are not hierarchical.
- Reflect on what has happened and why – complete the „What happened?' column.
  What happened? How did the student display what you have observed? What strategies did the staff use? Why is the student not engaging?
- Complete the „Next actions' column.
  What will I do next time and why? What will I change to engage the student more? How can I make the activity more appealing? Consider not only how to change the activity and staff strategies, but environmental factors, resources used, etc. Use the Inquiry Framework for ideas. Be creative!
- Add the „Scores' column to give the student's overall engagement total.
- Circle this score on the scale on the front page.*This acts as a quick visual reference*
- Review scores and scales regularly to ensure that any strategies being used are effective in increasing the student's engagement.

Struggling? Try…

Reflecting on the scales as a team…*people have different, yet valuable insights and interpretations.*
Using a camera to film...*if you are struggling to observe the student in the setting, filming them will allow you to reflect in more detail later.*
Using someone else to observe for you...*perhaps a teaching assistant, therapist, SENCO or another teacher. This might be a good way to share ideas too!*
Using the Inquiry Framework for Learning...*start at the 'Engagement' section.*

Engagement chart and scale

Student name:

Age:

Lesson / activity:

Target:

Date:

Time:

Date for review:

Completed by:

Overview of relevant issues *e.g. Environment / learner mood / noteworthy factors or differences*	**What 'next action' are you using from the last scale you completed?** *e.g. Introduce a computer-based initial activity to reduce demands on student when s/he first arrives at lesson; explain individually to student before lesson what s/he will be doing.*

ENGAGEMENT SCALE

Mark TOTAL engagement score from sheet overleaf:

No Focus					Emerging / fleeting							Partly sustained						Mostly sustained							Fully sustained
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

Engagement Indicators	Score (0–4)	What happened? What happened / what didn't happen and why?	Next actions What will I do next time and why? How will I make the activity more appealing (see Inquiry Framework)?
Awareness			
Curiosity			
Investigation			
Discovery			
Anticipation			
Initiation			
Persistence			
Total score		**NB NOW CIRCLE TOTAL SCORE ON SCALE** (previous page)	

Key for scoring	0	1	2	3	4
	No focus	Low and minimal levels – emerging / fleeting	Partly sustained	Mostly sustained	Fully sustained

Engagement chart and scale

Student name: Alfie

Age: 4

Lesson / activity: Food technology

Target: To increase attention (stay awake) in food technology lesson

Date: 10 May 2010

Time: 11.15 a.m. – 12.00 p.m.

Date for review: 17 May 2010

Completed by: A.N. Other (teacher)

Overview of relevant issues

e.g. Environment / learner mood / noteworthy factors or differences

Alfie had had a 40 minute sleep prior to the session.

What 'next action' are you using from the last scale you completed?

e.g. Introduce a computer-based initial activity to reduce demands on student when s/he first arrives at lesson; explain individually to student before lesson what s/he will be doing.

Move Alfie's chair away from main group so he is not startled by other children.

Use bowl of water to wash hands instead of cloth and paper towel.

ENGAGEMENT SCALE

Mark TOTAL engagement score from sheet overleaf:

No Focus					Emerging / fleeting						Partly sustained							Mostly sustained								Fully sustained	
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

Engagement Indicators	Score (0–4)	What happened? **What happened / what didn't happen and why?**	Next actions **What will I do next time and why? How will I make the activity more appealing (see Inquiry Framework)?**
Awareness	1	Positioning seemed to help, although Alfie fixed his gaze on the light above his head	Turn off light.
Curiosity	2	Smiled when he saw the dish coming towards him. He watched adult mash banana in it. Wouldn't initially touch banana, but showed curiosity when spoon had banana on it. He then allowed hands to be guided to it.	Offer motivating food first.
Investigation	1	Allowed adult to explore banana with his hands after he had tasted it.	Give time to explore food and present in dish.
Discovery	1	Stilled when he saw bowl of water for washing his hands, leaned forward in his chair and looked in the bowl. Allowed his hands to be placed in it. Followed bowl with eyes when taken to next person.	
Anticipation	0	Looked intently at water in bowl.	
Initiation	0	No initiation seen.	Put bowl on table in front of him. Give time for response.
Persistence	1	Alfie showed no obvious signs that he wanted to continue experience. He did still when adult spoke to him and showed him food. Vocalised when he didn't want to do something.	
Total score	**6**	**NB NOW CIRCLE TOTAL SCORE ON SCALE** (previous page)	

Key for scoring	**0**	**1**	**2**	**3**	**4**
	No focus	Low and minimal levels – emerging / fleeting	Partly sustained	Mostly sustained	Fully sustained

TReSEd21
Training Resources for Special Education in the 21st Century

The Specialist Schools and Academies Trust (SSAT) and Real Group are working together to produce a suite of learning materials for the TDA.

Overarching Principle:

By creating innovative and stimulating Professional Learning Pathways the materials produced by this project will:

- Capture the collective wisdom of skilled practitioners, leaders and academics
- Support the professional learning of all engaged in the education of children and young people with Severe Learning Difficulties (SLD), Profound and Multiple Learning Difficulties (PMLD) and Complex Learning Difficulties and Disabilities (CLDD)
- Inspire professional transformation by being engaging, accessible and elegant

In the TDA's words the project is to produce “training materials for teachers and trainee teachers in teaching pupils with PMLD, SLD and CLDD”.

The materials are to be designed to be used by all training providers: schools themselves, HEIs, and local authorities and as self-study materials.

The project will promote adherence to the following Principles of 21st Century Practice:

1. Practice-led
2. Evidence-based
3. Inquiry-focused
4. Research-informed

The training materials will:

- Raise awareness of specialist teaching and how it can support pupils with particular needs to achieve their educational potential
- Promote the challenges, rewards and excitement of working with these children in a range of settings
- Focus on improving teachers' knowledge, understanding and skills in relation to teaching pupils with SLD, PMLD and CLDD
- Focus on raising pupils' achievement and increasing their participation and well-being

The materials will be used flexibly, in a variety of settings and with a wide range of audiences, for example:

- Teachers in training or considering working with children with SLD, PMLD and CLDD
- Learning and teaching assistants and other members of the wider workforce/team around the child
- Teachers developing expertise and/or changing areas of responsibility

The project is led by Professor Barry Carpenter OBE, Academic Director at the Specialist Schools and Academies Trust and Alan Macgregor, Managing Director of the Real Group.

For further information about the project, please contact Rachel Nicholls, Project Manager, on rachel.nicholls@ssatrust.org.uk or 01733 405773.