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The Changing Landscape of Special Educational Needs - Complex Challenges and Creative Solutions.

Children and young people with complex learning difficulties and disabilities (CLDD) have been described as a 21st century frontier for education. During a three year, Department for Education-supported project in the UK, the author led a National project which researched 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. These children present considerable challenges to School Leaders.

They are a group that has emerged rapidly in the first decade of this 21st Century, largely due to modern medical progress, (eg, children born very low birth weight, due to extreme prematurity,) but there are also Societal factors that are presenting which are of cause for concern in the UK and Australia, (eg Fetal Alcohol Spectrum Disorders.) Both of these groups of children, and others falling into this descriptive framework, may require pedagogy beyond the experience of most Principals. Indeed the resolutions to some of their educational needs may have to be resolved through inquiry based approaches on a child by child basis.

WHO ARE THE CHILDREN WITH COMPLEX LEARNING DIFFICULTIES AND DISABILITIES? 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

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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.

These children challenge skilled professionals; they do not fit our current range of learning environments, curriculum models or teaching and learning approaches (Department of Education, 2011). Porter and Ashdown (2002) 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.

A wide ranging debate with CLDD project steering board and advisors and stakeholder groups including learning disability charities, resulted in the development of the following 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. 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. (Carpenter et al., 2011)

The increasing number of children and young people with CLDD in schools has been noted by researchers and educators. The Department for Education'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. Children with most severe needs represent about 3% of students in England (Hartley, 2010). The numbers of children with severe and complex needs in one local authority more than doubled between 1981 and 2001 (Emerson and Hatton, 2004). 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% (National Statistics, 2004, 2009). Emerson (2009) 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 advances' (McClusky and McNamara, 2005). Wolke (2011) 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') (National Center for Health Statistics, 2008).

CLDD IN SCHOOLS

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

...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 (eg cytomegalovirus, leukaemia and meningitis). (Cartwright, 2010)

Another observes:

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. (Fergusson and Carpenter, 2010)

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 CLDD RESEARCH

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 was 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.*

NEW GENERATION PEDAGOGY

To educate these children and young people with CLDD meaningfully, effectively and purposefully educators need to evolve new generation pedagogy (Carpenter, 2010a). This 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

The often variable profile of need and attainment of the child with CLDD 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.

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.

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 (Lewis and Norwich, 2005), and 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.

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? We need specific interventions (Wolke, 2009).

THE ENGAGEMENT APPROACH

Without engagement, there is no deep learning (Hargreaves, 2006), effective teaching, meaningful outcome, real attainment or quality progress (Carpenter, 2016). Children with CLDD need to be taught in ways that match their individual learning styles by teachers 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.

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. (Carpenter et al., 2011)

A focus on engagement can underpin a process of personalised inquiry through which educators 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 their journey towards optimal engagement in learning.

The Engagement Profile and Scale is a classroom tool developed in the course of this research. It allows teachers 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 within the Engagement Profile and Scale, teachers 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 monitored and 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. This can then be applied to other learning situations for the student.

USING THE CLDD PROJECT’S ENGAGEMENT PROFILE AND SCALE

The following is a case study of a child involved in the CLDD research project. It describes an intervention, structured and monitored using the Engagement Profile and Scale, which resulted in her re-engagement with learning.

Case study

Mia was a nine year old girl with a diagnosis of ADHD and Asperger syndrome, who attended a mainstream primary school. She had 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.

Mia had positive learning strengths. She was ready to engage in activities, and ask questions (e.g. 'What are we supposed to be doing?') or comment 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. Mia thus found participating in social interaction groups difficult.

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

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

MIA'S ENGAGEMENT PROFILE

An Engagement Profile was carried out for Mia around a high interest activity, and her behaviours against each of the seven engagement indicators were noted. Using Mia'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 Mia found particularly engaging about the activity, and thought about how they could generalise any engaging aspects of the high interest activity to one of Mia's low engagement activities. Mia'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.

MIA'S ENGAGEMENT SCALES

Following discussion, and after observing one of her low engagement activities – a numeracy lesson – the target chosen for Mia's intervention was 'to engage in the first part of a numeracy lesson'. It was apparent that she could concentrate 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 Mia.

Mia's other needs, mentioned above, were also borne in mind when developing intervention strategies.

Mia'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) Mia 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 Mia 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. Mia's class team considered this to be representative of her lack of engagement during numeracy.

Over the term-long intervention period, a staged series of interventions was put in place for Mia.

These included:

- *Changing Mia'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 Mia, each with its own tasks/activities. Mia could sustain engagement in the numeracy lesson for the short time periods, and an activity box was provided for Mia to use during scheduled breaks during the hour's lesson, which were shown on her visual timetable. When Mia 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 Mia) was given as a tool to attract attention and to remind her of the appropriate way to do so*
- *A visual schedule so Mia knew what she was supposed to be doing now and next*
- *Use of timer, so Mia 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.*

The interventions were successful, and Mia 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 Mia's self-regulatory periods, and increasing the time she was engaged in numeracy. From a lesson in

Mia's engagement scores over intervention period		
Date	Baseline score	Score post-intervention
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

which she had had a low level of engagement, Mia 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, Mia's teacher gave feedback about Mia's continuing engagement in learning:

Mia 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. Mia 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 [Mia] 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 [Mia] 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 Mia. They have had copies of some of the resources used with the children and are suggesting their use in other schools!

CONCLUSION

The Engagement profile and scale allows educators to trial different ways of working with students and to collect evidence about which approaches work best for the student. Collaboration is a corner stone of the inquiry approach – with families, with colleagues from other disciplines, with the whole class team, and with the student themselves. Insights from one perspective can create success for the student across their whole learning experience.

Over the course of the CLDD research project, research schools carried out inquiry-based interventions on a short-term basis. Each period of intervention lasted for one term. For many students who had been priority concerns for their schools, this was long enough for educators to gain an insight into ways of engaging them. The educators were then able to generalise the adaptations they had made to engage the student into other learning areas, and move their focus to other students who were disengaged. Other students needed an extended period of intervention so that school staff could explore in depth how they could engage the student in learning, (Carpenter et al, 2015.)

The capacity to transform a child's life for the better, and equip them to enjoy active citizenship, is at the heart of education. For many school leaders this ethos is what drives them to ensure that their schools are at the cutting edge of practice with a curriculum that embraces each student, however complex their needs, as an active learner. Many students with CLDD are disengaged from learning – actively or passively. To re-engage them as learners requires more than differentiation (Porter and Ashdown, 2002); an intensive approach is needed. Students with CLDD need to follow unique lear-

ning pathways, which take educators beyond differentiation into personalising learning. At this level of student need, educators, and their leaders, need to respond with practitioner-led, inquiry-based approaches.

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