

Appendices

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APPENDIX 1: List of school participants

Abbey Hill School, Stockton-on-Tees	The Hub, Sanderson's Wynd School, Scotland
Alfreton Park School	Ifield School, Gravesend
All Saints CE School, Weymouth	Jack Tizard School, London
Allenvale School, New Zealand	James Rennie School, Carlisle Kilton
Applefields School, York	Lakeside School, Welwyn Garden City
Arbour Vale School, Slough	Lancasterian School, Manchester
Arohanui School, New Zealand	LaVoy Exceptional Centre, USA
Bardwell School, Bicester	The Manchester Health Academy
Beacon Hill School, Wallsend	Mapledown School, London
Bettridge School, Cheltenham	Marshfields School, Peterborough
Blackfriars School, Newcastle under Lyme	Mary Rose School, Southsea
Bradfields School, Chatham	Mayfield School, Whitehaven
The Bridge School, Telford	Meath School, Ottershaw
Brookfields School, Reading	Merstone School, Birmingham
Castle Hill School, Huddersfield	The Milestone School, Gloucester
Castle Tower School, Northern Ireland	Modbury School, Australia
CDC, Warstones School, Wolverhampton	New Bridge School, Oldham
Chadsgrove School, Bromsgrove	New Rush Hall School, Ilford
Christchurch CE Primary School, London	North Ridge School, Manchester
Colmers Farm Junior School, Birmingham	North Devonshire Personalised Learning Service
Concord School, Australia	North West SILC, Leeds
Dawn House School, Rainworth	Oak Field School, Nottingham
Downs View School, Brighton	Oak Lodge School, East Finchley
Ellen Tinkham School, Exeter	Oakfield Park School, Pontefract
Federation of Rosendale Primary School, London	Orange Ridge Bullock School, USA
Firwood School, Bolton	Parkside School, New Zealand
Fitzwaryn School, Wantage	Patcham House School, Brighton
Fosse Way School, Radstock	Patricia Avenue School, New Zealand
Garratt Park School, London	Percy Hedley School, Newcastle Upon Tyne
Gem Centre, Wolverhampton	Phoenix Children's Resource Centre, Bromley
George Hastwell School, Barrow-in-Furness	Phoenix School, London
Gilbertstone Primary School, Birmingham	Portfield School, Wales
Haberdashers' Aske's Federation, London	Portland College, Sunderland
Haybridge High School, Hagley	Priory Woods School, Middlesborough
Highfield School, Wakefield	Riverside School, Orpington
Highfurlong School, Blackpool	
Holly Bank School, Mirfield	

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 SEN/ professional reports)			
Professionals/agencies involved with the student on an on-going basis			

P/NC/other level – Maths/numeracy:

P/NC/other level – ICT:

P/NC/other level – English/literacy:

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
Angelman'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-Hirschhorn 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 schizencephaly	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
Holoprosencephaly with panhypopituitarism	1
Megalencephaly / hemi	1
Migraines	1
Oral pharyngeal dysphagia	1
Perinatal hypoxic encephalopathy	1
Pulmonary hypotension	1

Quadriplegia	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-Hirschhorn 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
Hydrospadis	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
Thalamic 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 <i>Not at all</i>	2	3	4	5 <i>Extremely</i>
<i>What are your reasons?</i>				
(b) the briefing sheets				
1 <i>Not at all</i>	2	3	4	5 <i>Extremely</i>
<i>What are your reasons?</i>				
(c) the inquiry framework?				
1 <i>Not at all</i>	2	3	4	5 <i>Extremely</i>
<i>What are your reasons?</i>				

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

<p><u>Educational</u></p> <ul style="list-style-type: none">• To improve his concentration & attention skills• Further develop Simon's thinking, reasoning and learning skills <p><u>Communication</u></p> <ul style="list-style-type: none">• Develop effective and efficient communication <p><u>Personal, social and emotional</u></p> <ul style="list-style-type: none">• 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 <p><u>Physical, sensory and medical</u></p> <p>None</p>

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

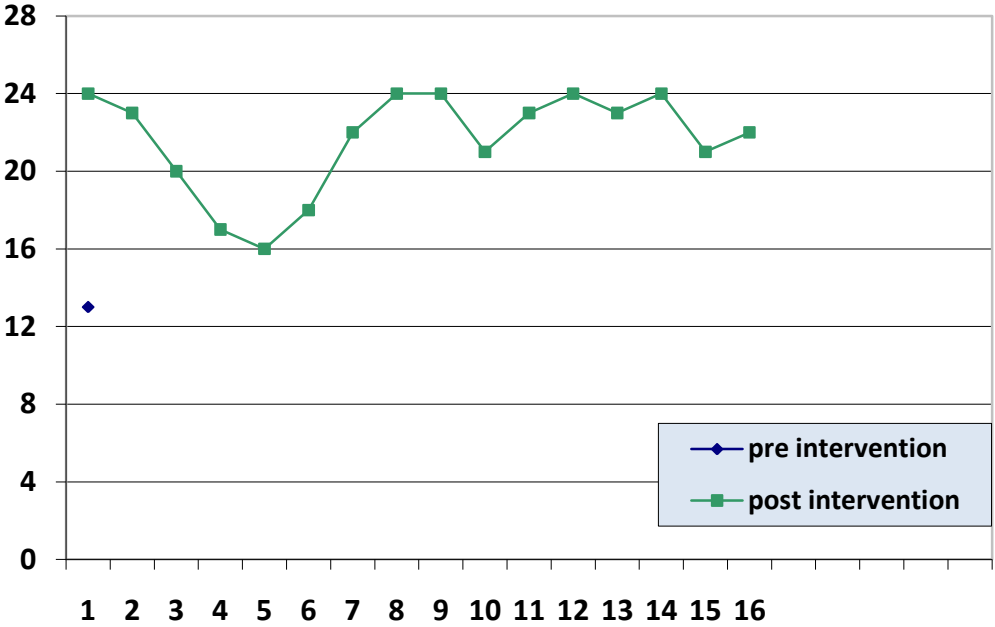
			the activity will finish;.
3	30.3.10		Retrospective analysis of a successful of a snack time. Calm, focused, waiting for his turn and appearing to listen to what was said. Noisy. Action points: Simon did not appear to have the full understanding of the PECS strip or symbols. He had observed his peers 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 2 nd 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 2 nd 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 2 nd 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 quiet 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://complexd.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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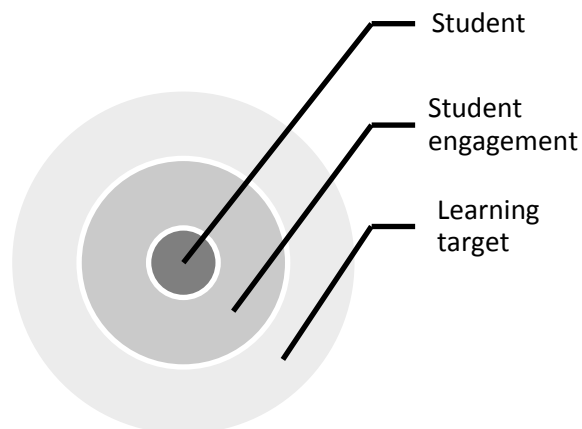
Definitions

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)

Actively trying to find out more within or about an activity or experience

INVESTIGATION

PERSISTENCE

'Sticking with it': continued effort (may be in short bursts), perseverance, determination, refusing to give up or let go

ANTICIPATION

Shows expectancy or prediction as a result of previous knowledge, experience or skill

DISCOVERY

'Light bulb moment': a new or repeated action or experience (planned or chance) that causes realisation, surprise or excitement, etc.

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

AWARENESS

Alfie will still his body and tilt his head slightly to the side to listen. If the stimulus is something he likes he will smile, vocalise and keep his eyes on the object.

INITIATION

Alfie will reach out to touch something if he likes it. Alfie vocalises for the action to start again.

CURIOSITY

Alfie will show curiosity by looking briefly at an object. He will sustain his attention by tracking the object or stimulus. Head is still tilted. Lights and sounds arouse his curiosity within the learning task.

ENGAGEMENT PROFILE

Name:

Alfie

Date:

2.3.10

SUPPORTED

Alfie will lean over to look at an object and may reach out with either hand to touch it. He looked to see where the water was coming from.

INVESTIGATION

PERSISTENCE

Alfie will continue to vocalise and his vocalisations sound quite cross. The pitch changes and the vocalisations become louder. Alfie will move his arms and legs as well as moving his upper body from side to side. He persistently waited for the water activity

ANTICIPATION

Alfie will become quite vocal, move his upper body and head and look for an object or motivating sound. He may vocalise and move his mouth into an open mouthed shape. Shows anticipation when water is moved away.

DISCOVERY

Alfie will still and listen. He will smile and become excited by moving his arms and legs and by vocalising. He may touch the object with his mouth. He discovers the water is coming out of the bucket goes into the tin

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

Lesson / activity: Food technology

Date: 10 May 2010

Date for review: 17 May 2010

Age: 4

Target: To increase attention (stay awake) in food technology lesson

Time: 11.15 a.m. – 12.00 p.m.

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
						6																						

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.