

Understanding Autism and Education.

Designing an Autism-friendly Mainstream Primary School: An ‘Inclusive’ Approach.

By Phoebe Campbell

BSc Psychology

This essay will design a mainstream primary school, for an autistic child, based on one case-study, Connor aged 11 (appendix). Providing an idiographic approach to adapting autistic friendly schools. Connor has a dual diagnosis of speech, language and communication difficulties (SLCD), but enjoys engaging and can communicate mostly. For this reason, mainstream school seems best suited for him, research suggests being around peers can encourage language development (Myles,1993). I have chosen a primary school age group as there is greater freedom within the curriculum to focus on less academic areas; useful for Connor as he enjoys music and drama. Mainstream education enables a greater focus on/ access to social elements such as ‘peer-mediated’ interventions which have evidence for reducing ‘challenging behaviour’ such as Connor’s anger issues and promotes language (Bond,2016). The main difficulties I hope for Connor to overcome are: language, knowing when to ask for help, his maths frustration and staying calm (in terms of anger and anxiety).

Autism Spectrum Disorder (ASD)

ASD is defined by the DSM-5(2013) as a developmental disorder with varying severity, characterised by persistent, pervasive and restrictive deficits in social communication and interaction across contexts. Over 1 in 100 people are diagnosed with ASD in the UK, averaging 700,000 (Brugha,2012). Although, it is likely to be more, being a spectrum disorder there is not a clear manifestation of signs and it is often measured against development, making the diagnosis harder. Zablotzky in 2019, found when diagnosis became more sophisticated in the US prevalence increased from 1 in 91 children to 1 in 40,

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suggesting a more sophisticated diagnosis in the UK may increase prevalence. Wing and Gould(1979) created the ‘Triad of Impairments’ (Fig.1) three areas that people with ASD find challenging. Despite making his ASD apparent, Connor’s triad (Fig.2) does suggest some elements are less severe, e.g. he has empathy for other children and a sense of humour (social and emotional), perhaps due to his SLCD Connor’s autism manifests predominantly through communication.

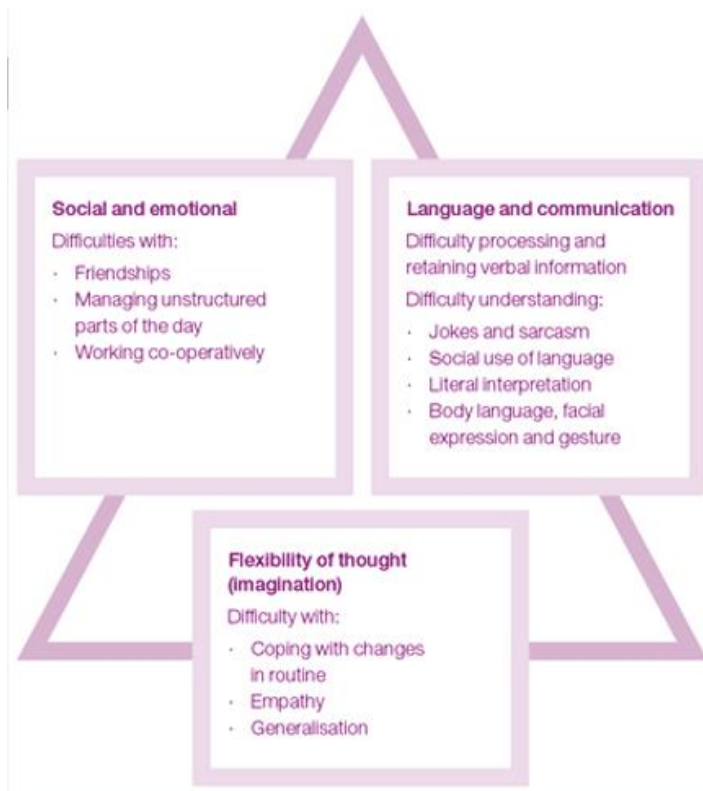


Fig.1 Triad of Impairments (Wing and Gould, 1979).

There are robust psychological theories explaining ASD. ‘Theory of Mind’ (ToM) hypothesis was reached after Baron-Cohen(1985) conducted a false belief task, originally based on Premack and Woodruff(1978). The task proved that children had the ability to understand

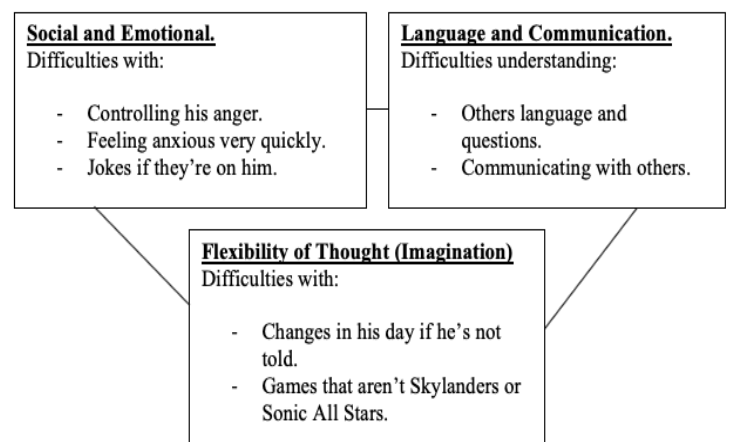


Fig.2 Connor's Individual Triad of Impairments.

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other people's minds (e.g. beliefs, emotions etc), Baron-Cohen discovered that 80% of participants (children with ASD) failed this. Concluding this cognitive deficit alone suggests a child suffers with autism and has since been empirically supported heavily (Baron-Cohen, 1993, 1997; Leslie, 1987; Frith, 1991). In recent years ToM has been criticised, Begeer in 2003 conducted a false belief task and found children with autism only needed to be prompted one or two times more than the control in order to relieve the researchers 'false belief'. Suggesting that child with ASD may not naturally have ToM but, it can be learnt and used, dispelling some of the negative connotations attached to 'cognitive deficiency'. It is likely Connor has partly learnt ToM because of his ability to be 'concerned' for others.

The theory of weak central coherence (WCC) is a popular theory of ASD and refers to a child's 'unique processing' often with a focus on local information, ignoring the 'bigger picture' (Frith, 1989). For Connor WCC is seen partly when he is singing and his desire to hit every note. None the less, not every child slots into these theories, Connor's slowest development involves language and a study by Riches (2016) found little evidence to support WCC in the 'verbal domain'. Whilst these theories are extremely useful in identifying and supporting children with ASD, if the child has 'High-functioning autism' like Connor, it is best to tailor their environment based on what they perceive to be their challenges.

Whole School Approach

The school will be offering an inclusive environment following the guidelines of the department of health and education (2014) there will be no tolerance for discrimination and reasonable adjustments will be made for any student with vulnerable characteristics (Equality act, 2010). This school's ethos will be to provide a friendly learning environment allowing everyone to excel. A social model of disability will be adopted ensuring that Connor never

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feels he does not fit in, but instead feels it is made just for him. Alderson and Goodey(1999) express the importance of teacher training; every teacher will attend mandatory training to broaden their knowledge on ASD, there will be an emphasis on teachers talking slowly and addressing Connor before they address the whole class to ensure he understands what is being said.

Connor gets along well with adults so in order to provide a sense of reassurance a reliable teaching assistant (TA) will be assigned, providing the ‘scaffolding’ necessary for Connor to tackle tasks (Milton,2016), e.g. Maths or ‘playground problems’. This teacher will have access to the most up to date training surrounding ASD, therefore a useful resource to other teachers and children when needed (Symes and Humphrey,2011a). Symes and Humphrey (2011b), suggested TA’s were not very helpful, a key issue raised was regarding the lack of collaboration with the main class teacher. To tackle this issue Connor’s TA will work together with the main teacher planning lessons so Connor’s needs can be acknowledged constantly. Connor’s teacher and TA will have fortnightly meetings with Connor’s parents to ensure a holistic insight into Connor’s life, results show parent involvement reinforces the things learnt in school. (Benson et al,2008)

The school will have an assembly on PECS to raise awareness and teachers will be provided with training to ensure they feel comfortable and are taught how to introduce PECS to the classroom (Liddle,2001). Although Connor is older than the children who would typically use PECS, Bondy and Frost (1998) suggest it can be used as a form of communication for more advanced things e.g.teaching new concepts. Ostry (2008) suggested that PECS is only effective when used in combination with other language techniques, ensuring communication competence. However, given that Connor despite his



SLCD can talk, PECS I believe will be effective for him provided teachers use clear language alongside the pictures, this way the language is being constantly reinforced and promoted.

Connor will have a set of PECS cards (Fig.3) so he can initiate using them, this control will ensure he doesn't see PECS as 'babyish'.

Connor will benefit from having a separate 'calm room' for when he is anxious or angry, to escape the classroom or playground. It is valid to suggest Connor will enjoy sensory stimulation as 70-96% of ASD children find it calming (Piller,2019). The room will incorporate Skylanders, (Fig.4), the projector will show images of multiple

Skylanders (See Fig.5) like seen in fig.4, to draw Connor's attention and calm

Fig.3 PECS Cards.



him. Ambler(2015) found that anxiety was a moderator of aggression in adolescents with ASD, therefore if this room reduces Connor's anxiety it is likely to improve his control over anger also.



Fig.5 Skylanders.

The calm room will feature a sensory pod (Fig.6) providing Connor with a space completely for himself. This pod's light colour can be changed by Connor to reflect how he is feeling (as he sometimes cannot communicate this), giving the teacher a valuable insight, a chart inside the pod will remind Connor (Fig.7); an idea adapted from Koo (2014) who had a similar technique with "Tell-me clothing" and found that children with ASD found it easier to express their feelings with the prompt of colours.

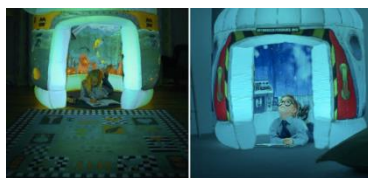
How are you feeling?				
TURN THE LIGHT...				
HAPPY	CALM	SAD	ANGRY	I DON'T KNOW

The room will also include a Lego table(Fig.8), a perfect area for play-based interventions. Henning (2016) empirically supported the use of play intervention, if peers were chosen carefully, given that Connor has ‘high-level’ functioning and makes ‘good friendships’ it’s more appropriate to let him decide who to play with in the calm room. ‘Circle of friends’ may be a useful technique to help boost Connor’s confidence in friendships, the group can meet weekly in the calm room giving Connor the reassurance of inclusivity (Whitaker,1998).



Fig.8 Lego Table.

Classroom Design



Sensory Pods
For your
Sensory Room



Anxiety co-occurs in 65% of adolescents with ASD (Attwood,2004), classrooms, especially in a mainstream school could trigger Connor. The key to

Monday	Tuesday	Wednesday	Thursday	Friday
Spelling 9:00 - 9:30	Spelling 9:00 - 9:30	Physical Education 9:00 - 9:30	Spelling 9:00 - 9:30	Assembly 9:00 - 9:30
Reading 9:30 - 10:00	Reading 9:30 - 10:00	Spelling 9:30 - 10:00	Reading 9:30 - 10:00	Handwriting 9:30 - 10:00
Computer 10:00 - 10:30	Writing 10:00 - 10:30	Spelling 10:00 - 10:30	Grammar 10:00 - 10:30	Writing 10:00 - 10:30
Recess 10:30 - 11:00	Recess 10:30 - 11:00	Recess 10:30 - 11:00	Art 10:30 - 11:00	Reading 10:30 - 11:00

Feelings chart.

Fig.6 Sensory Pod. Fig.9 Class schedule.

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reducing anxiety was establishing the cause for each individual(Hoffman,2013). Connor enjoys: knowing what is going to happen each day, praise for doing well and to be reminded to take his time. Based on these needs a TEACCH (Treatment and Education of Autistic and related Communication handicapped Children) approach will be used playing to Connor's strengths (Mesibov & Shea,2010). Scheduling will be used (Fig.9) ensuring Connor can see what each day will involve. Connor enjoys his friends and likes the people at his school so he will sit on a table with other classmates who are



Fig.10 Connor's Desk.

chosen by the teacher to model focus and good behaviour (Lanquetot,1989). If Connor becomes anxious, distracted or needs greater support e.g. in Maths he can sit at his own desk to separate him, also acting as a quiet station (Fig.10) ultimately, Connor has the freedom to sit with his classmates if he can manage his behaviour. The most crucial part of TEACCH, I feel will benefit Connor are the physical structures (Schopler,1995). The tables will be different colours, providing a visual cue defining the space, blue tables = work, Red tables = anything else, to minimise disturbance each class will remain in the same classroom for all

Simple layout: calm, ordered, low stimulus spaces, no confusing large spaces; indirect lighting, no glare, subdued colours; good acoustics, avoiding sudden / background noise; robust materials, tamper-proof elements and concealed services; possibly H&S risk assessments; safe indoor and outdoor places for withdrawal and to calm down. (DfEE. 2009. p.199)

Fig.12 DfEE Guidelines.



lessons. Connor (and the class) will have designated seats to maintain routine, Connor will always face away from the window and door decreasing distractions. The classroom (Fig.11) will follow the guidelines set out by the DfEE (2009) (Fig.12). MacDuff (2001) suggested that pictorial and written prompts are effective in reinforcing routine so a 'take your time' poster (Fig.13) will be on the wall next to Connor's desk to remind,

with a picture of Sonic so he knows the poster was made just for him.

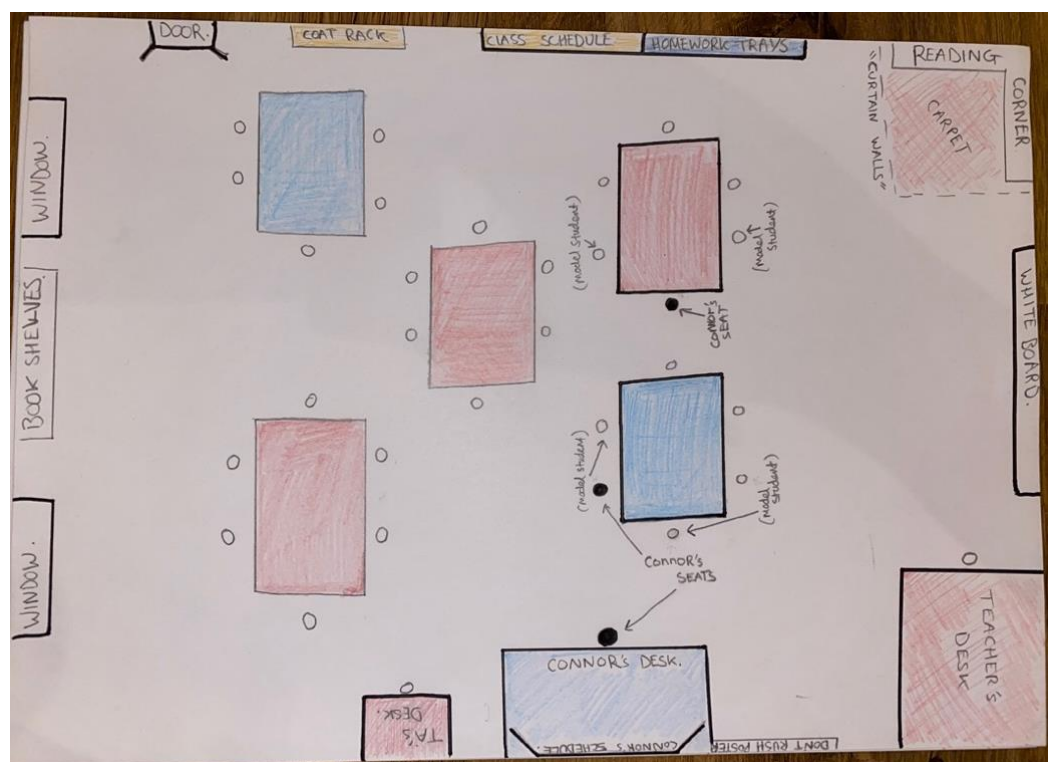













Fig.11 Classroom Layout.

Connor's Plan For the Day and Activity

Each day will be presented visually on a schedule (TEACCH format) (Fig.14) reducing

Fig.14 An example of Connor's Daily Visual Schedule.						12.00am	1.00pm	1.30pm.	2.30pm	3.30pm
Arrive at School.	Come in& hang up coat.	Sit at Connor's Desk for register.	Maths.	Break.	Literacy .	Lunch.	Calm Room.	History.	Activity-Social Story/ Music.	Home Time.
										

Connor's anxiety using routine, this has been proven to optimise performance

(Schneider,2010). Connor's other schedules incorporate things that never change e.g.

entering the classroom and hanging up his coat. If for any reason something is changed i.e.

location of Connor's desk, he will have to be prepared for the change multiple days in

advance to avoid disruption to his routine and trust in teachers. Connor may rush his maths

and get it wrong; with the help of the TA and Maths that surround interests e.g. Skylanders or

Lego (Mesibov,2015) I believe Conner will maintain engagement.

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Connor enjoys singing, so music class will be a source of entertainment, there is potential for him to get anxious, if the music becomes too loud, or he begins to get frustrated. It will be useful to teach him some social stories (SS)(Karkhaneh,2010) to learn how to act when encountering social challenges(Fig.15). The teacher will read each section to Connor before they begin music. SS are an ASD intervention applicable to a multitude of areas, there are drawbacks, not every social situation can have a 'rule of thumb' response, but for most ASD children it is better to have some template rather than nothing and higher-functioning children may learn to generalise the SS.

Conclusion

With the use of PECS and his peers it's likely Connor's language will improve, using TEACCH Connor's engagement in maths will increase. The calm room promotes reduced anxiety and anger. Combining these adaptations alongside a TA is likely to give Connor the confidence to ask for help if he needs to. All of these improvements will effectively benefit Connor's learning. There are limitations: adaptations will use a lot of funding and Connor may not be able to cope with the demand of mainstream curriculums. Although, I believe that the adaptations e.g. the different seating options, provide enough freedom to test how well Connor can cope with different situations whilst maintaining enough routine to provide security. In general, schools should promote a idiographic approach to children

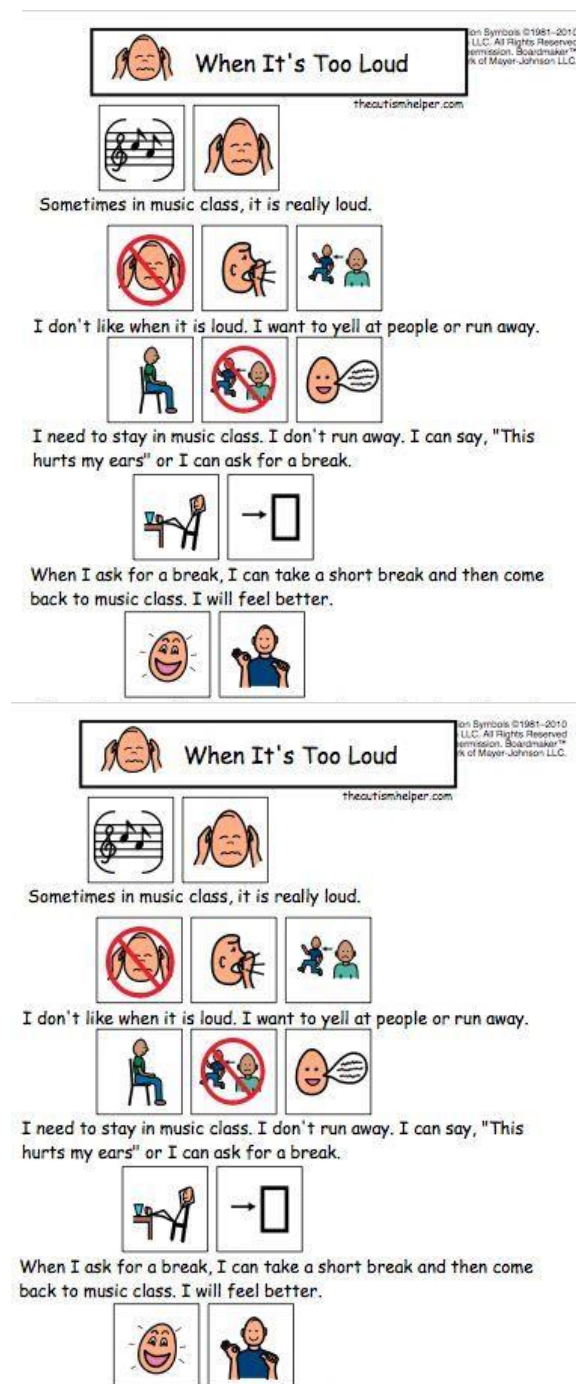


Fig.15 Musical Social Story.

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with ASD, even if there are not the means to provide all the design elements discussed above, one is better than none, every child benefits from attending a ASD friendly school.

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Appendix.

Connor – one page profile

What others like and admire about Connor

Very caring towards others and concerned if they are ill or upset
Good singer, good friend, funny, helpful, very good boy
Being a good big brother to Amelia making sure she's safe.
Being loving
Good sense of humour
Cheeky

Connor's story

Connor is eleven years old and has a dual diagnosis of speech, language and communication difficulties and autistic spectrum disorder. He is very caring and loves singing and drama. His personality endears him to adults and he has built some good friendships. He speaks as he finds and has a sense of humour if the joke isn't on him. He lives at home with both parents and has a younger sister.

What's important to me?

Playing Skylanders most days. It's a Play Station 3 game. They are heroes who save Skylands from the dark forces such as Chaos and Arkeyans.

Eating healthy food like fruit. My favourite fruit are apples.

Building with Lego. I build something new every time.

I like playing with Lego on weekends and in school holidays

Racing against dad when we play 'Sonic All Stars Racing Transformed' on dad's Play Station 3 in the holidays.

The people I see in school are important to me because they help me with my work.

How best to support me

Sometimes I get my maths wrong when I rush. Remind me to stay calm and take my time so I can think about what I am doing.

I take longer than others to process language and understand questions that you ask of me
I respond well to some use of pictures to support your use of language but I don't like the pictures to be 'babyish'

If I have a problem at break times, I like to try and sort it out on my own. Sometimes I need an adult to help me sort it out.

If I get a note wrong when I'm singing I get annoyed with myself. Tell me that it is okay.

If someone hurts me it pushes my big red button which means I am really angry. A teacher should remind to calm down and tell me that if I hit them back I will be in trouble and this helps me to calm down.

I get very anxious very quickly, have a calm environment to escape to and helping me by telling me what is going to happen each day can be really helpful.

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(with thanks to Helen Sanderson Associates)