Data Analysis for Pupils with SEND

Presented by: Dale Pickles, Managing Director, B Squared

B Squared

- B Squared products are all about supporting pupils with SEND

- We help schools to show the small steps of progress pupils with SEND make.

- Different frameworks for different ages and ability - EYFS, Primary and an Autism profiling tool

- Reduces teacher workload - identifies next steps, shows progress and supports meaningful communication

- Our products are used by around 15,000 schools

- We have over 25 years experience around showing progress for pupils with SEND

- We talk to hundreds of schools every year about their difficulties around assessment, data and showing progress for pupils with SEND and help them to solve these problems.

Dale Pickles

- Managing Director of B Squared
- Worked in SEND for over 20 years
- Supports schools around assessment, data and showing progress for pupils with SEND
- Host of the award winning SENDcast - podcast for Special Needs
- Host of the SEND Briefings and training courses on our Training for Education CPD website

The SENDcast was the winner in the Publication of the Year category in the 2022 nasen awards

Data Analysis for Pupils with SEND
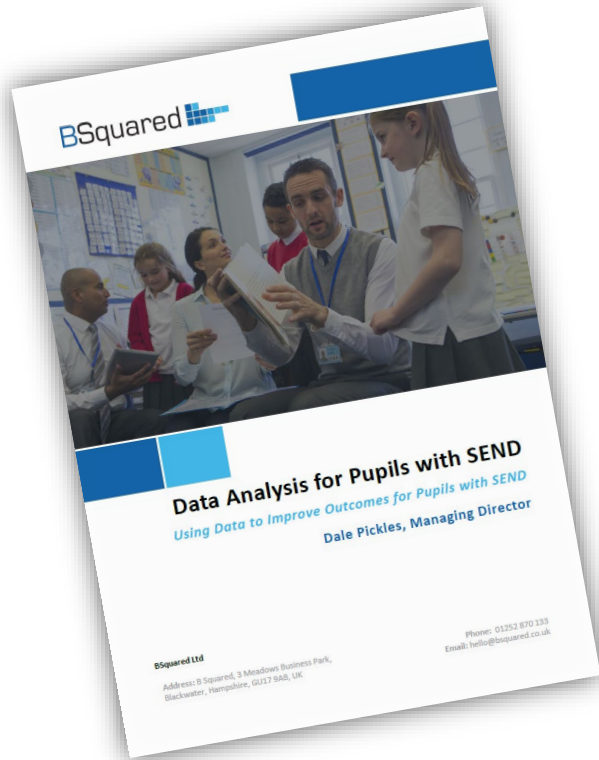
I have written a document looking at analysing data. I will go through various parts within this webinar, but the document is available for further reading and to refer back to. Like this webinar, the document is designed to help improve your practice around data and make more use of your data.

You can download the document by clicking on the link below this webinar.

Join in the chat as I go through this webinar, I will try to respond as we go through.

3 Webinars Around Data

This is the first of three webinars around data. During these webinars I will help you all be less scared of data and help you use your data to improve your school. The final webinar is a tour through our new Analytics platform and how it helps schools use data correctly.

Part 1

Target Setting for Pupils with SEND (Available on the B Squared Website)

Part 2

Analysing Data (This webinar)

Part 3

B Squared Analytics Platform

What is Data?

Quantitative

Numbers based, countable or measurable. It is fixed and universal.

Qualitative

Data is descriptive, or interpretation based. It is subjective and unique.

What is Data?

Quantitative (numbers)

- Score in a test
- Height
- Age
- Attendance
- Weight
- Closed Questions

Qualitative (not numbers)

- Conversation with a parent
- Photo/video Evidence
- Email from a parent
- Pupil Voice
- Observations
- Open Ended Questions

Which one is more reliable?

B Squared Ltd | www.bsquared.co.uk

What is Attainment?

A measure of a pupil's ability against recognised education standards.

(What a pupil has achieved in an educational context)

Achievement and attainment are very similar, but attainment is looking within an educational context and achievement is looking at a much wider range of skills

Attainment is where they were on a specific date.

B Squared Ltd | www.bsquared.co.uk

What is Progress?

Progress is moving forward. Progress means improving. In our cars, phones and technology, we see progress. We also see it how we think about things like mental health.

In terms of education, we think of progress as the number of skills or knowledge a pupil has gained between two dates.

Progress is the difference between 2 attainment points

How Reliable is Your Data?

If you are using teacher's judgements, how are you ensuring all your teachers have the same understanding of the curriculum, the same expectations and the same flexibility around their judgements?

If you can't rely on your teacher judgements, then any data you produce will be misleading and any decision you make based on this data will be wrong.

Triangulation

If you cannot answer if your progress is good enough using progress data on its own, look at the quality of teaching.

Quality of Teaching and Progress are linked

Is Progress Good Enough?

Progress Data

Quality of Teaching
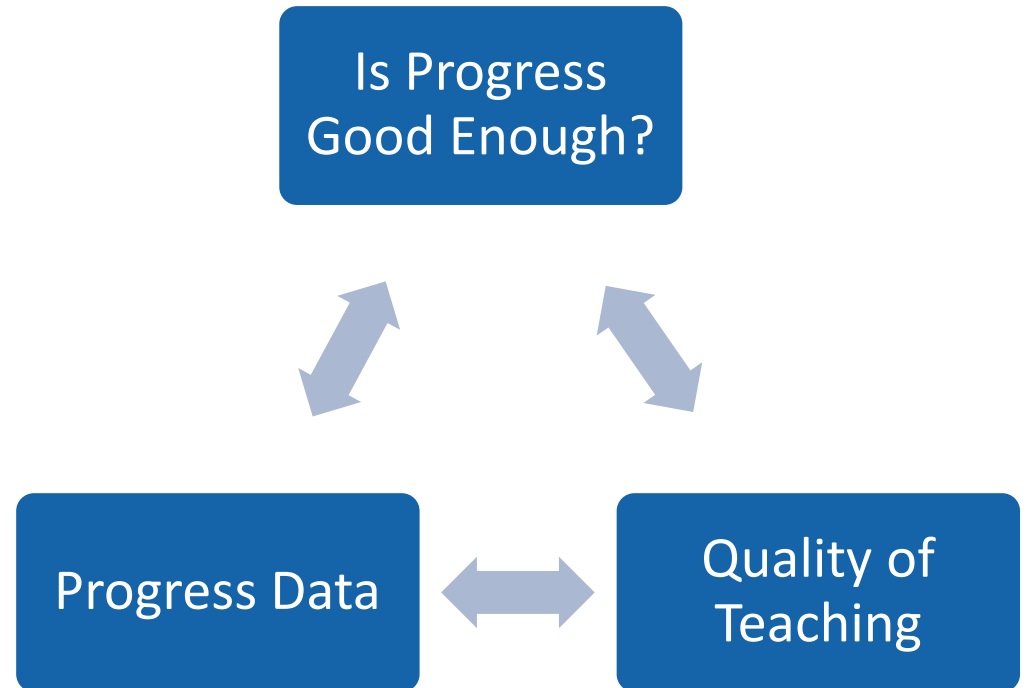
Types of Progress?

Linear Progress (Quantitative)

The simplest way to look at progress is linear progress. Progress is the difference between two attainment points that only look at their current level. This way of looking at data assumes that all pupils learn in the same order.

All progress is technically linear. I cannot count to 10 before I can count to 2.

A subject or area of the curriculum is several strands or concepts joined together. I might be better at some concepts than others, my progress can become spiky, I might work across different levels. This would be non-linear progress.

Types of Progress?

Non-Linear Progress (Quantitative)

Non-linear progress is about celebrating all progress. Instead of ignoring my ability in decoding and focusing on my struggle with comprehension, non-linear progress recognises all the progress I am making. We can show spiky progress.

Pupils with SEND don't develop in a nice simple uniform way and they can have multiple barriers. Some of these barriers stop a pupil from making progress if you only look at progress in a linear way. With non-linear progress you can show there is progress, that they are learning new skills, even though there are some skills they cannot achieve.

Types of Progress?

Engagement/Achievement (Quantitative)

Linear and non-linear progress generally require pupils to achieve skills, but before a pupil can achieve a skill, they need to engage with the activity. If they don't engage, there won't be progress.

This is the fundamental principle of the Engagement Model. It doesn't just apply to pupils with complex needs, it applies to all of us.

If the pupil is engaging in more activities/learning opportunities or are they requiring less support to achieve skills, they are making progress. Sadly most assessment systems schools use do not show this type of progress.

Which Type of Progress is Best?

There is no simple answer!

Most systems are limited, they can only show linear progress.

Out of England, Scotland and Wales, only the Welsh Government recognises non-linear progress.

What you use depends on what you are trying to show. If we are looking at academic progress, it will be quantitative data and we can use all 3 types of progress.

If you are looking at non-academic/softer skills, the data will be more qualitative, so you won't be able to do the numerical representation, it will be about interpreting the data.

Which Type of Progress is Best?

Linear Progress

You will always start here, it is the simplest way to look at data. This will be suitable for most pupils.

Non-Linear Progress

If you struggle to show linear progress, move on to non-linear progress. Are they making progress on other levels?

Engagement/Achievement

If they aren't achieving skills, are they requiring less support? Are they more engaged?
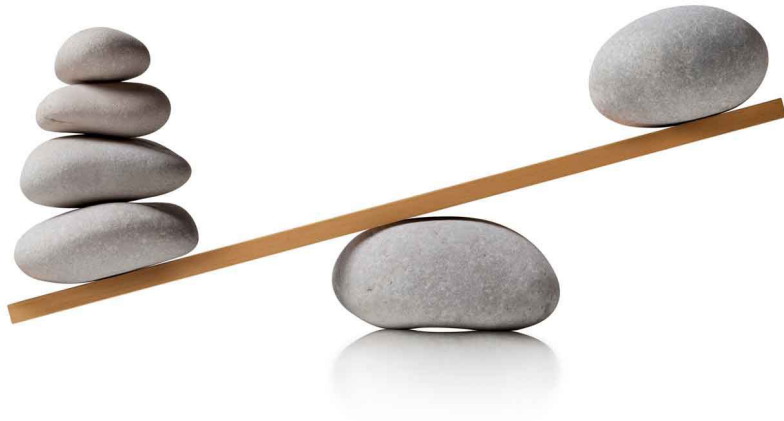
Simple

Complex

Not All Levels are Equal

Once Upon a Time in a Galaxy Far Far Away….

We had P Levels and Levels. The way they were often presented visually is that the levels were all the same size. Expectations were the same for each level.

They weren't the same size.
(The DFE recognised this themselves)

There are lots of different frameworks, all with different sized levels. Judging progress effectively requires more work.

Not All Levels are Equal

		Progression Step 6	Year 2
Exc. ELG		Progression Step 5	
		Progression Step 4	Year 1
ELG		Progression Step 3	Primary Step 3
Children in Reception			
3 & 4 year olds		Progression Step 2	Primary Step 2
2½–3 years	Engagement Step 6		
2–2½ years		Progression Step 1	Primary Step 1
18–24 months	Engagement Step 5		
12–18 months			
9–12 months	Engagement Step 4		
6–9 months			
3–6 months	Engagement Step 3		
0–3 months	Engagement Step 2		
	Engagement Step 1		

A pupil going from 0% of Progression Step 6 to 50% of Progression Step 6 has made 50% progress. Another pupil went from 0% of Progression Step 3 to 50% of Progression Step 3, they have also made 50% progress.

If we look at standardised scores instead of level scores, the first pupil went from 6.5 to 6.75, an increase of 0.25. The second pupil went from 4.0 to 4.66, an increase of 0.66.

Although the amount of progress within each level is the same, the second pupil's progress is over double the first pupil's. **Levels being different sizes can easily mislead people when making judgements around progress.**
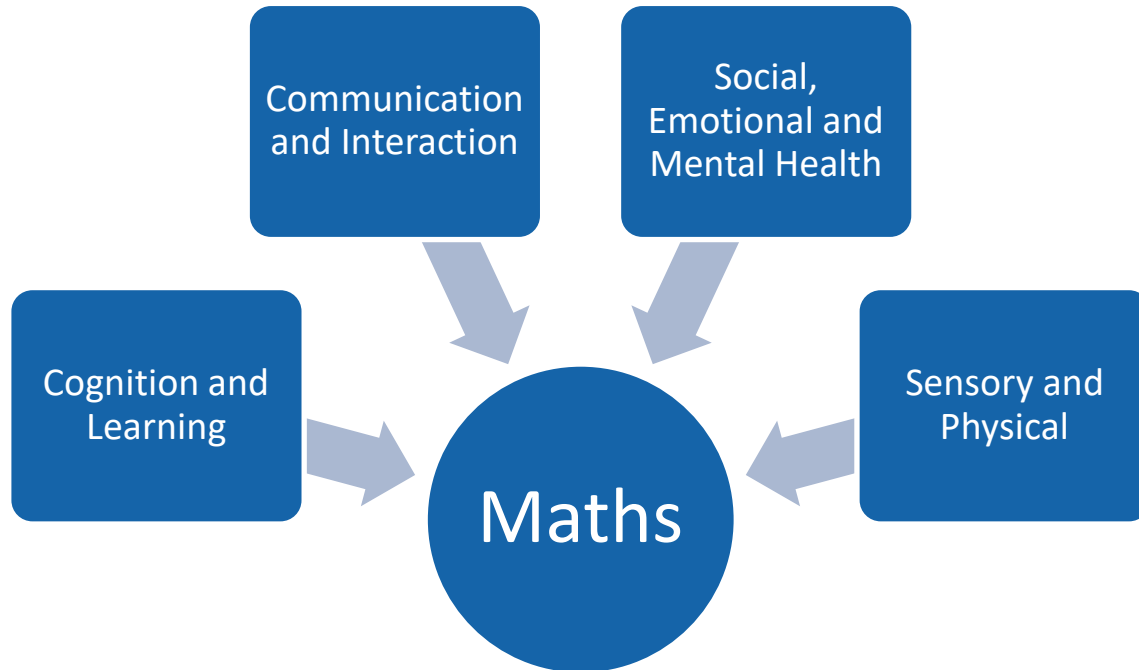
Cause vs Effect

The definition of insanity is doing the same thing over and over expecting different results.

The Government sometimes thinks that to improve an area of education you just keep repeating it until the pupil finally achieves it. If a pupil struggles with phonics, just keep doing phonics until they get it.

We might see a pupil struggling with Maths (the effect), but that is probably not the cause. If you only focus on the effect, you can spend lots of time focussing on the wrong area and see no improvement. There is so much more going on before we get to Maths.

Cause vs Effect

Communication and Interaction

Social, Emotional and Mental Health

Cognition and Learning

Sensory and Physical

Maths

Any pupil could be struggling with one of these areas, not just pupils with SEND. It could be an undiagnosed need, or it could be an area they need support in for a short period of time. If a pupil is struggling in lessons, have a think about these areas as well as supporting them within the subject.

By supporting these areas effectively, we can remove barriers and we are likely to see academic progress.

Cause vs Effect

Self-actualization
desire to become the most that one can be

Esteem
respect, self-esteem, status, recognition, strength, freedom

Love and belonging
friendship, intimacy, family, sense of connection

Safety needs
personal security, employment, resources, health, property

Physiological needs
air, water, food, shelter, sleep, clothing, reproduction

This is Maslow's hierarchy of need. Maslow suggests that for someone to reach their potential, their needs have to be met across a series of different levels.
If a pupil struggles to make friends or there is an issue in a friendship group, this will all have an impact on their academic progress.

If pupils are struggling in these areas, then support here is more important than their academic progress.

What is Progress Measuring?

If I am looking at progress in Maths for a large group of pupils, what am I really measuring?

- Maslow's hierarchy of need
- Four broad areas of need
- Quality of teaching
- Curriculum
- Teacher's curriculum knowledge
- Senior Leaders
- Quality of resources and teaching material

Generally, when we are measuring progress, we aren't measuring pupils. We are measuring how effective our learning opportunities are, how well we know our pupils and how effective we are at meeting their needs.

Does a Graph Give a Judgement?

It shows us data that we interpret. We might want all pupils to achieve something, if the graph shows they don't achieve it, what does it mean?

A graph generally doesn't give us a judgement, it gives us questions. It might give us an answer, but this will often lead to more questions.

How Should I Analyse My Data?

I am not going to answer the question "What process do you use to analyse your data?"

I am going to answer the more philosophical question of "How do you really analyse your data?"

The process you use will depend on the systems you have and the data you are analysing. Before you get to the process, you need to know what you want to find out.

How Should I Analyse My Data? - Questions

**How you analyse your data is about asking and answering questions.
If you don't have any questions, there is nothing to analyse.**

There are some generic questions you can ask of every school's data; this will give you a starting point:

- Boys vs Girls? Is there a difference? Why?

- How do Pupil Premium/PEF/PDG pupils compare to the rest of school? Why?

- Does ethnicity have an impact on progress or attainment? Why?

- How does progress compare to last year? Why?

- How do Looked After Children compare to the rest of the school? Why?

How Should I Analyse My Data? - Questions

Another source of questions is your school improvement plan. Are there any SEND specific targets? Was there a target about improving Writing across the school? Does the school data show an overall improvement, but your data for SEND pupils show there has been no improvement? Why?

The questions you ask should be relevant to your school. It could be areas of concern within the school or areas you have been working on and developing. You may even overhear conversations about different aspects of the school and the curriculum, can you use data to confirm people's feelings?

How Should I Analyse My Data? - Questions

What Happens If I Don't Have Any Questions?

You will always have the generic questions as a starting point. You will always generate the 'Why?' questions as you talk about the data.

Perhaps the reason you don't have any questions is because you know your data cannot provide answers.

You know your data doesn't have the detail you need.

Playing With Data

If you simply have "Below" for pupils, how can you answer any questions around why they are below? How can identify areas for improvement?

How confident are you with your teachers judgements? How do you know your pupils are really at "Expected"? Are you using tests to back up teachers judgements?

You need to be able to drill down into your data to answer questions. Can you drill down into individual student data from your whole school data easily? Does it have the detail you need?
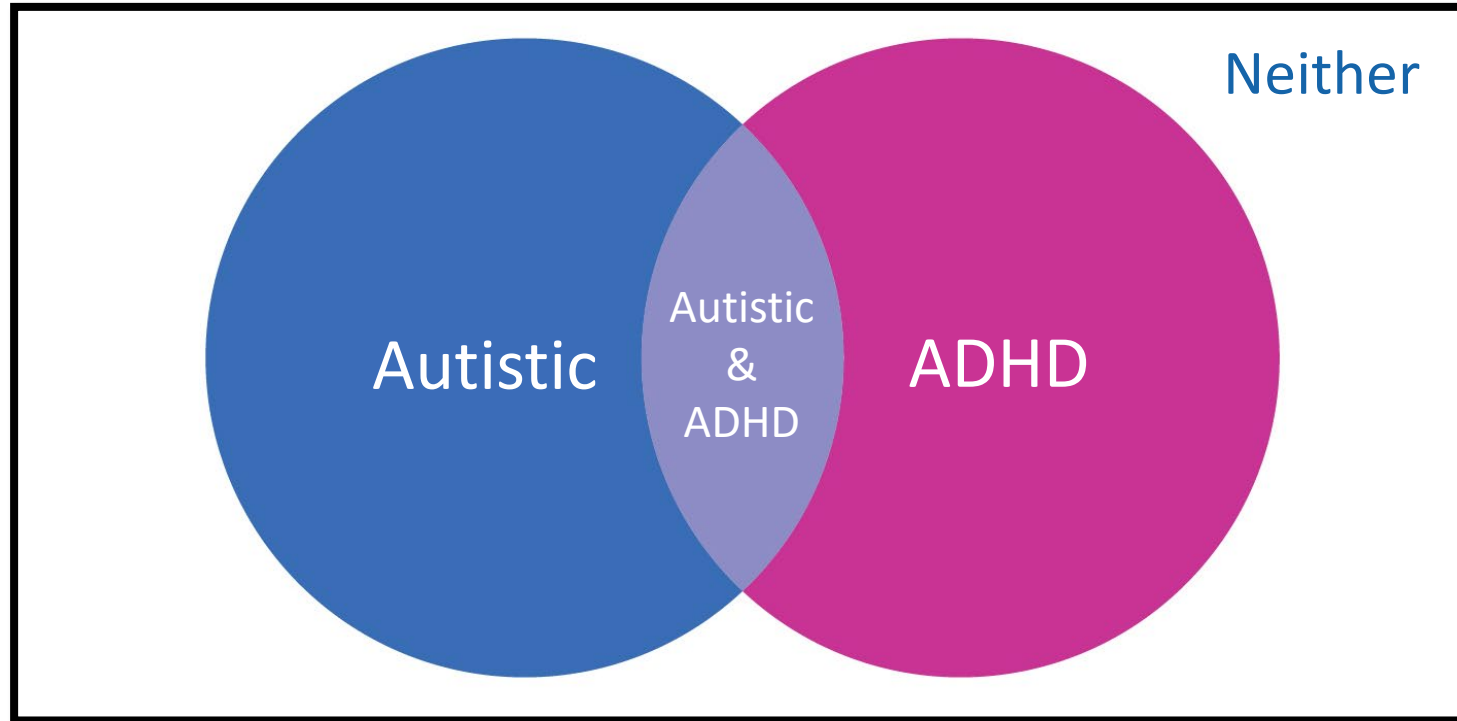
Playing With Data - Groups

You need to play with groups. There are lots of different types of groups, we have the typical cohorts like FSM, EAL etc., we also have our class groups, year groups and key stages.

If I look at Pupil Premium vs non Pupil Premium across the school and then look at the same graph for each year group, do they all show a similar pattern?

Don't just think of one level of group, combine groups.

Playing With Data - Groups

We can compare 4 different groups

Autistic ADHD Autistic & ADHD Neither

  B Squared Ltd | www.bsquared.co.uk

BSquared

Playing With Data - Groups

Is there other data you can use to identify groups of pupils? How does progress compare between pupils with above 95% attendance and those below 95% attendance?

Another type of group to think about are those specific to your school. If you have school transport, is there a specific transport that always has issues? Are they always late in the morning? Does this have an impact on progress? If you are trying a new intervention with a group of pupils, how does their progress compare to the rest of the school?

The groups you identify within your school will tell you more about your school than the generic groups we are used to using.

B Squared Ltd | www.bsquared.co.uk

Playing With Data - Dates

Once you've played with the groups and identified a group or groups where progress is lower than expected. The first question is "why?" and then next is "when?" If you are looking at progress over a year and progress is low, has it been low the whole year? Was it low last year? When did it start to drop?

How was progress in your school between September 2019 and July 2020?

Playing with dates and then thinking about the changes around the school will really help you identify how the changes have impacted your pupils.

Playing With Data - Sorting

This is similar to filtering but can make things more obvious. I could be looking at progress and filter by year group, class or level. If I sort by class, I might see a pattern that some classes make more progress than others. This could be expected as they are the more complex classes, or there could be no obvious explanation.

If I filter to pupils on a particular level and then sort by age, I can look at which pupils are making the most progress. Looking at pupils on the same level, I should see the younger year groups making the most progress and older year groups making the least.

Older pupils working at the same level as younger pupils will make slower progress

Sharing Data - KISS

Keep it simple stupid! (KISS). The KISS principle states that most systems work best if they are kept simple rather than made complicated. This applies to everything! It is about designing things for other people, not for you. You may love data and get a warm fuzzy feeling when you open Excel, most don't.

You need to summarise data, a simple way of sharing the data so that others can understand it.

If people can't understand your data, they cannot be part of a discussion around the data.

KEEP CALM AND Keep it SIMPLE

Sharing Data – What do I Share?

The data you share will be data that makes a difference to pupil outcomes. This could be areas for concern, areas of change or areas to show the impact of improvements.

Do not spend time creating graphs that don't impact on pupil outcomes. It should be based on agreed areas, like progress on areas in the school improvement plan.

Sharing Data – What do I Share?

Across a school year, the data you share needs to be consistent. It makes it easier for people to understand and they can easily compare data to the previous term.

It does **not** need to be consistent year after year. The reasons for this are:

a) you need to allow for improving your processes

b) data that is relevant one year might not be relevant the year after.

Sharing Data – How do I Share?

The data you share needs to answer the questions you are asking in a clear, concise manner. It shouldn't be a big excel spreadsheet.

You need to summarise your data in a way that is easy to understand, that answers the question your school is asking of the data. Adding relevant, comparable information will help people understand.

In reality, the aim is to spend as little time looking at the data you have shared and as much time discussing solutions.

Sharing Data – What Do Ofsted Want to See?

They don't want to see your data.

They want you to understand your data, they want your data to drive changes in your school and they want to see you implementing those changes.

There is no folder full of graphs you need to make each year.

They want your data to help you improve your provision.

What Is Good Progress?

What Is Good Progress?

"Good academic progress for a student who is working 1 year developmentally behind their peers would likely be determined by their individualised education plan (IEP) …………… Typically, good academic progress for these students would be measured by progress relative to their individual needs and abilities, rather than compared to their non-disabled peers."

ChatGPT, January 2023

Judging progress for pupils with SEND should be based on their individual needs and abilities

What Is Good Progress?

Attainment of Similar Cohorts

There have been attempts to create national datasets for pupils with SEND. The data produced was unreliable. Any datasets that do exist are too small to provide any useful data.

Do all pupils with autism in Year 4, working around Year 1 have the same barriers? Are they getting the same support? Does their autism impact them in a similar way? Is autism there only area of need? The problem is that in these data sets you cannot answer any of these questions. They should not be used.

What Is Good Progress?

Prior Attainment and Progress

Prior attainment is one of the first places to look at when judging progress. It is the best starting point. If a pupil made 30% progress last year and there has been no changes in provision, it would be reasonable to expect 30% progress this year.

Provision shouldn't stay the same year on year as schools should be looking to improve the provision to improve outcomes. There are also many other factors that have an impact on outcomes. This is why prior attainment and progress is only a starting point.

What Is Good Progress?

Formula

Some schools simply have a formula they have created, or they have been given. Where the formula comes from or what it is based on is sometimes never known. It might be as simple as an amount of progress all pupils with SEND should make over a year. This simply doesn't work, it just sets schools up to fail.

Do you want to base your judgements on pupil performance on a formula someone else created? Do you want to base all your judgements around your staff, pupils, curriculum etc. on a formula created by someone who has never seen your school?

# Low Progress Does Not Mean Bad Progress

- What was the pupil working towards this year?
- How does progress compare to last year?
- In what areas has the pupil made progress?
- What changes have we implemented and what effect has this had?
- How does their progress compare to other pupils working at the same level?
- Have there been external factors?
- What support has been put in place?

You might feel they could make more progress, but within their current context, is the progress good enough?

What are you changing to remove the barriers? How are you helping them to make the progress you feel they can make?

What Is Good Progress
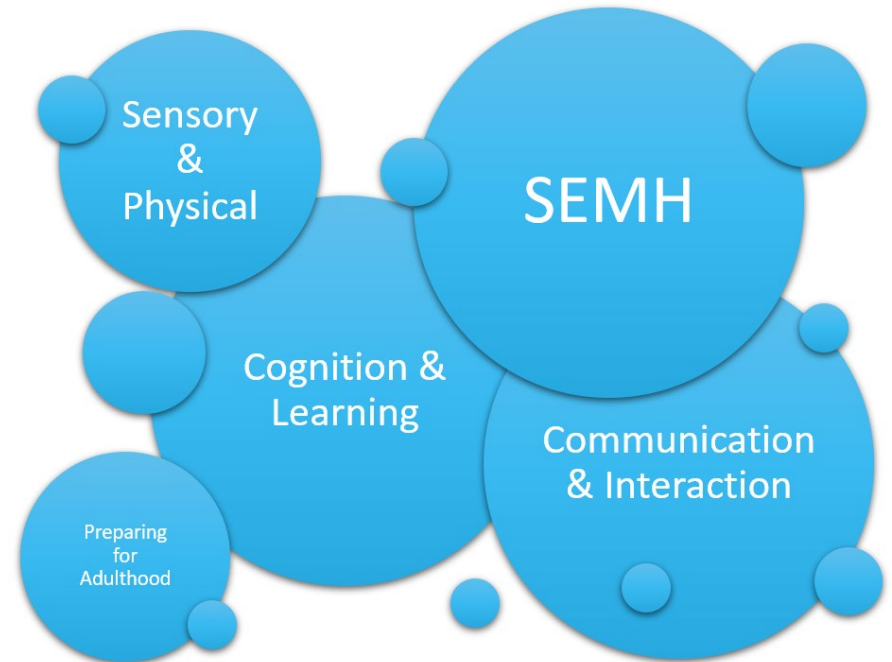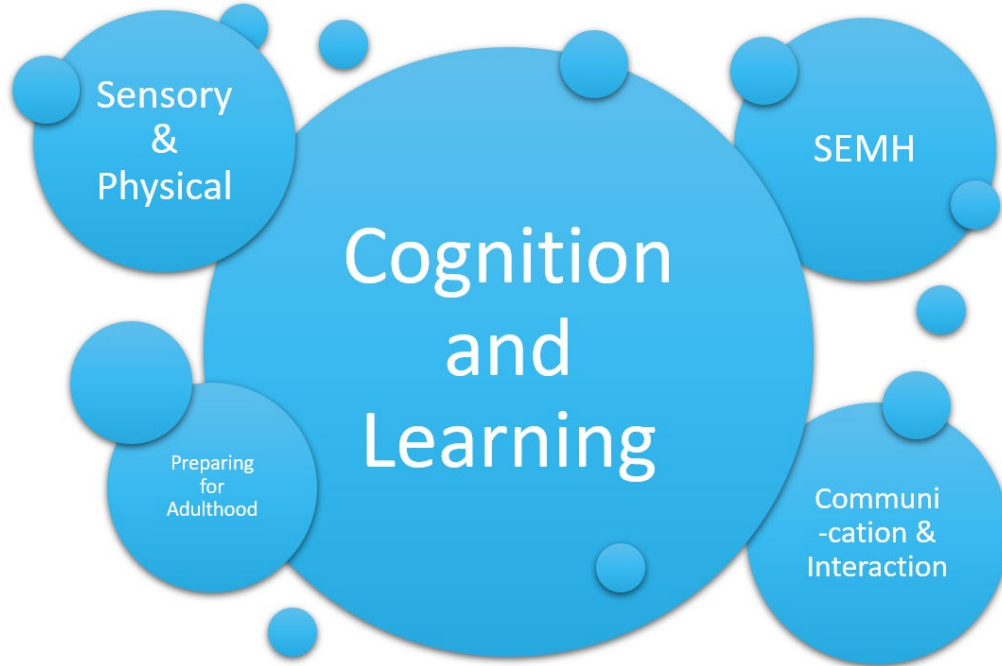
What Is Good Progress?

Only those who really know a pupil can answer if progress is good enough.

What is good progress for one pupil might not be good progress for the next. Answering the question 'Is progress good enough?' depends on which version of the question you are asking.

Has the pupil made good progress with the quality of teaching and support available?

OR

Has the pupil made good progress based on the time spent learning in this area?

OR

Has the pupil made good progress?

Can We Use a Single Judgement on Progress?

If a pupil at the start of the year wouldn't enter the classroom and the school have spent the whole year supporting the child to attend lessons and engage, the pupil has made amazing progress with their SEMH and their Communication and Interaction this year.

However, they won't have made lots of progress in Reading, Writing and Maths. Is their progress in Reading, Writing and Maths important at this point? Most people would look at where the pupil was to where they are now and say the pupil has made amazing progress.

Do we need all of those judgements, or could we just have an overall judgement, focussing on what is important for the pupil?

Measure What You Value

If you only share information with parents around English and Maths, your parents will only ask you about English and Maths.

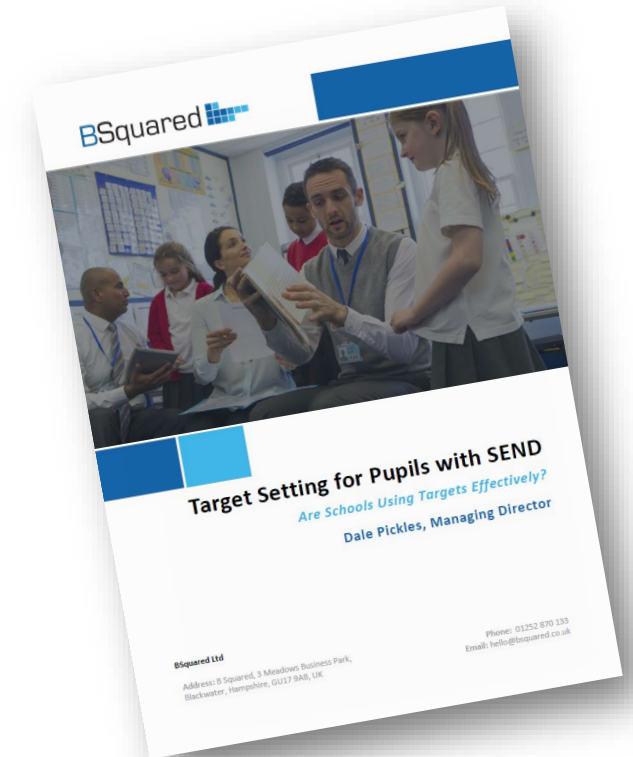What is important to your pupils and their parents?

Review your Approach to Target Setting

I have already run a webinar on target setting, I have also written a 35 page document on target setting, looking at what schools are doing, what they should stop doing and what they should do going forward.

On page 24 of the document is a set of questions to help you review your own approach to target setting.

It is really worth reading so you can identify if what you are doing is helping improve pupil outcomes OR is it just because this is the way we have always done it?

Target Setting for Pupils with SEND
Are Schools Using Targets Effectively?

Dale Pickles, Managing Director

BSquared Ltd
Address: B Squared, 3 Meadows Business Park, Blackwater, Hampshire, GU17 9AB, UK

Phone: 01252 870 133
Email: hello@bsquared.co.uk

This is the way we have always done it

The most dangerous phrase in education is

"This is the way we have always done it"

If you ever hear this it means they don't know why they are doing something. They can't give you a better reason why it is done, because there isn't one.

You only hear this phrase when you are asking about something that serves no purpose.

Improving Knowledge Around SEND

SENDcast - THE SPECIAL NEEDS PODCAST

APPLE PODCASTS   SPOTIFY   GOOGLE PODCASTS
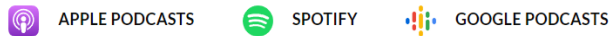
MULTI-AWARD-WINNING PODCAST

EDUCATION RESOURCES AWARDS 2022 FINALIST

WINNER OF THE TEACH PRIMARY AWARDS 2021

THE SENDCAST NAMED BEST EDUCATIONAL PODCAST 2021

- FREE podcast, listen via the website, Spotify, Apple Podcasts, Audible, Amazon Music and any other podcast app
- New episode every week, with over 100 episodes featuring 28 different guests
- Covers a wide range of topics including anxiety, emotions, Autism, school avoidance, masking, ADHD, behaviour, language, SENCO workload, ACC and so much more
- Created to support everyone in schools, parents and more.

www.thesendcast.com

Or just search SENDcast in any podcast app

Improving Knowledge Around SEND

BSquared

FREE SEND Briefings

Our biannual FREE SEND Briefings in March and September help schools keep up to date with changes around SEND.

Our next briefing is on the 22nd March 2023

You can access this briefing as well as future and past briefings on the Training for Education website

TRAINING FOR EDUCATION

Online CPD platform including the Virtual SEND Conferences. Affordable, effective and easy to access training around SEND

www.trainingforeducation.com

Improving Knowledge Around SEND

£6,000 SEND Notional Budget

Do you really understand the £6,000 SEND Notional budget? Are you receiving all the money you legally entitled to? Is your LA acting within the law?

Garry Freeman joined us in the autumn term to discuss the £6,000 SEND Notional budget. The 45 minute presentation was followed by a Q&A session that lasted over an hour!
There were lots of schools being mislead or denied funding they are legally entitled to. Make sure you understand the law and be confident in holding your LA to account if they aren't

You can purchase access for your whole school for just £5

using the code Feb2023

Online CPD platform including the Virtual SEND Conferences. Affordable, effective and easy to access training around SEND

www.trainingforeducation.com

Q&A – Ask Your Questions

If you have any questions and haven't asked already,

please ask your questions in the chat window.

Dale Pickles – *email me for more information or if you have any questions*

dale@bsquared.co.uk

Book a FREE online meeting with me using the button below if you want to discuss target setting and data

Podcast - www.thesendcast.com

Dale Pickles – *email me for more information or if you want a copy of my slides*

dale@bsquared.co.uk

Book a FREE online meeting using the button below

Podcast - www.thesendcast.com

Online CPD - www.trainingforeducation.com

B Squared Ltd | www.bsquared.co.uk