

Supporting Children with Additional Learning Needs

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

- ChatGPT – I used the prompt “write a definition of what additional learning needs is include references 2015 and 2025” – 31.03.25
- Slidestogo – I used this website to use the graphics for the poster – 31.03.25
- I used asked copilot “find me an article on why some mothers don't have prenatal checks dated from 2015” 05/05/25

Hello, thank you so much for inviting me to the Trinity Saint David's webinar. I am Gemma Williams, and I will be talking to you about Down Syndrome. I have always been aware of Down Syndrome as an additional learning need, but I did not know anything more about it. Since September, I have been teaching a child in reception class, and I wanted to ensure I had the knowledge needed to meet her specific needs and develop her learning.

What is Down Syndrome? Down syndrome is a genetic disorder caused by having an extra chromosome. Most people have 46 chromosomes—23 from the father and 23 from the mother. These chromosomes determine how the baby grows and develops in the womb. A child born with Down Syndrome has an extra Chromosome 21, so they have 3 chromosome 21's which is why Down Syndrome is also known as Trisomy 21. This additional chromosome affects how the body and brain develop, leading to physical, intellectual, and developmental differences (Cinelli, 2022). Down syndrome is one of the most prevalent chromosomal conditions, occurring in approximately 1 in every 700 live births worldwide (United Nations, 2023).

The Down Syndrome Medical Interest Group (2024) say that there are three types of Down syndrome: Trisomy 21, accounting for about 95% of cases, where every cell has an extra chromosome 21; Translocation, where part of chromosome 21 attaches to another chromosome; and Mosaicism, a rarer form where some cells have the extra chromosome while others do not.

There are two ways DS is detected. Expectant mothers can be screened for DS by a blood test and from measurements taken in an ultrasound scan in their prenatal check-ups (Downs Syndrome Association, 2024). Public Health Wales says that screening is a choice given to mothers to check if the baby has any health conditions. Parents are also offered an amniocentesis if they have received a positive test result; this is where a sample of amniotic fluid is taken from around the baby (New Health Advisor, 2019).

When researching the diagnosis of Down Syndrome, I was shocked to see that many families have had a negative experience during their prenatal check ins. The Down Syndrome

Association (2020) have reported that parents were not offered support and advice when receiving a diagnosis, and many stating that they were offered a termination of the pregnancy. The Down Syndrome Association (2020) does not want a world without DS; their aim is for health organisations to be trained to support expectant parents in an unbiased way. To help with this *The Down Syndrome Act 2022* is new legislation ensuring public services, councils, and schools are better equipped to support people and their families with DS.

Down Syndrome can also be detected when the baby is born. The image on the poster shows the characteristics that babies with DS are born with, which may be a marker to show that a child may have DS. Healthline (2019) say that there are distinctive physical characteristics such as a short head, a flat facial profile, the corners of the eyes slant upwards, they have a flat nasal bridge and a protruding tongue. These are common features of a child with DS, but it is not used to diagnose Down Syndrome. NHS (2023) says that once Down Syndrome is suspected, DNA tests are carried out for confirmation.

Sarah? QUESTION – When talking about prenatal examinations, is there a reason why some expectant parents do not attend these?

Yes, some parents choose not to undergo prenatal scans and tests for a multitude of reasons. Smith (2019) states that personal beliefs could be a reason, adding that expectant parents were not concerned regarding the outcomes of the tests, stating that whatever the results were, they would never consider terminating a pregnancy. Sadlecki *et al.* (2018) talk about the worry of the risks that some examinations carry, such as an amniocentesis. Others have said that financial restrictions are a barrier to their attending clinics due to some countries charging for health care (Smith, 2019).

Aprigio *et al* (2022) say that mothers who are older than 35 have a higher chance of having a child with DS. However, this is a common misconception; Leach (2013) disagrees and states that most infants born with DS were to mothers under the age of 35. Additionally, Centres for Disease Control and Prevention (2024) support this and add that the statistics are higher as more women have babies when they are younger.

Barriers

Children with Down syndrome may face a range of barriers that can affect their development, learning, and participation in everyday life. I am going to examine communication as a barrier that has many implications for a child who has DS.

Communication

Including Pupils with Down's Syndrome. (n.d.) say that the majority of children with DS have speech and language difficulties. All children use communication to interact with others and children with DS have a strong understanding of non-verbal communication and gestures making it easy for them to make friends (Downs Syndrome Association, 2021). However, they need the skills and support to navigate these relationships through guidance from

practitioners (Downs Syndrome Association, 2024). Downs Syndrome Association (2021) states that children understand more than they can say; resources such as communication boards can help them to communicate and provide them with a voice. This is underpinned in the United Nations Convention on the Rights of a Child, article 12 (UNICEF, 1989).

Prath (2022) describes the way children with DS communicate as unique because there are so many different characteristics which vary from child to child. These can include muscle tone, and a narrow palette compared to tongue size, which both make it difficult to pronounce words correctly. Special Strong (2024) reports that non-verbal communication such as gestures, facial expression and touch are strong traits of a child with DS adding that they are very good at reading people's emotions. Interventions such as speech and language therapy and use of sign language are ways to overcome the barrier of communication.

Michelle - QUESTION

Do you believe that children with Down Syndrome should be in mainstream education?

Yes I believe that all children should be in mainstream education. However, the needs of the child must be met by the educational institution, allowing that child to develop and thrive. Warnes, Done and Knowler (2021) report the issues that mainstream schools face in providing education for children with additional learning needs, which include financial issues, and the expertise and knowledge of staff.

According to the research by Er-rida *et al* (2024), historically, children with Down syndrome were often placed in institutional settings, separated from their peers and communities.

Down Syndrome International (2024) advocates the importance of children with DS attending mainstream educational establishments, in order that they can mix with, and learn skills alongside, their peers. Children with DS in an inclusive educational establishment have many benefits, including academic, social and emotional skills, all which improve the lives of children with DS. Inclusion also helps to promote acceptance and understanding in society (Er-rida *et al*, 2024).

Additionally, there have been various Educational Acts which have supported children with disabilities and have enabled a positive move towards inclusive education (Hargreaves, 2021). The most recent being the Special Educational Needs Code of Practice, which is a legislation of the Children and Families Act 2014, which ensures that support through high quality teaching is provided to all identified with Additional Learning Needs.

Advocates such as actress Sally Phillips have highlighted the holistic benefits of such integration and she has examined the Finnish education system, which, in her opinion, has the best inclusive education (Phillips, 2018).

Strategies

Bird (2016) states that children with DS all have learning difficulties but these vary from child to child, so practitioners need to plan and support activities for every individual. Woodhouse (2025) and Hargreaves *et al* (2021) both share the view that children with DS have been shown to have better learning outcomes and achievements in education when they have practitioners who offer support and drive the individual learner.

Including pupils with DS (n.d) and Public Health Wales (2024) both say that Children with DS cannot learn from being taught verbally, but they are, however, strong visual learners.

I am now going to discuss the use of visual supports in aiding the learning of children with DS.

Shabiralyani, *et al* (2015) state that visual aids are an item used to ensure that learning is more authentic, helping children to become more involved in the learning process. Bird, (2016) says that using visual supports can aid attention and keep a child with DS stimulated for longer periods. Positive Action, (2021) furthers this and states that visual learning helps DS children process information more easily.

Timetables

Positive Action, 2021 and Ups and Downs Southwest, (n.d.) both state that using pictures and symbols helps children to know what is coming next, which can alleviate anxiety and support children in understanding the daily routines and concept of time. Additionally, Ups and Downs Southwest (n.d) add that independence and resilience can be improved from the child's understanding of their activities.

Social Stories

Beelfwa (2023) says that social stories guide children through unfamiliar situations. They can help children understand how they must behave and act through personalised pictures. Shabiralyani, *et al* (2015) advocates the use of social stories as these can help children understand and resolve situations, therefore making it clearer and easier to understand the reasons why one should behave in a particular way and the benefits of this, for example to keep them safe. Sheffield Children's NHS Foundation Trust, (2021) also adds that social stories can be used to prepare for changes, such as a transition period or to teach new skills. Frank (2024) and Positive Action (2021) believe that social stories can develop strategies to socialise with others or to put anxieties at ease.

Visual Cues

Children with DS use visual clues to develop independence and to aid them in remembering and understanding situations (Frank, 2024). Visual cues can be shown as a prompt for instructions or expectations of behaviour (Positive Action, 2021).

Communication boards

These boards can aid children to communicate. As previously discussed, children with DS have difficulty with speech and communication (Down Syndrome Resource Foundation, n.d.), therefore using communication boards allows a child to be heard and help practitioners to understand their needs. Wellbeing check-ins can help the children to communicate how they are feeling (Frank, 2024). Providing a board which children can use to choose what they want to do, or what they like, develops independence.

Conclusion

The Down Syndrome community strive for children with DS to be included in everyday life and mainstream education (The Down Syndrome Association, 2020). A holistic approach should be individualised, considering the child's needs.

Overcoming barriers requires early and consistent support, inclusive education, and community awareness to ensure every child with Down syndrome can reach their full potential. With the *Down Syndrome Act 2022* and government funding, children and their families can receive the support and care they need to ensure a successful and independent life.

Thank you for allowing me to talk to you today about Down Syndrome. I hope you've found the content informative and allows you to support children and their families of DS in the future. If there are any questions, please don't hesitate to contact me.

Diolch

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