

How can support for children with Noonan Syndrome be embedded within the Early Years Curriculum?

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ECEY6006
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Introduction:

Noonan Syndrome (NS) is a genetic disorder involving RAS signalling pathway variants, affecting cellular processes like neural plasticity. Physical symptoms of NS include distinctive facial features, joint pain, scoliosis, and sensory impairments (NHS, 2021; SSBP, 2022). While some children thrive in maintained settings, others require specialist support (Noonan Cantata, 2023; Shiels *et al.*, 2021). Despite being the 'most common rare disease you have ever heard of', NS lacks visibility within the UK education system. Consequently, children are often placed on the SEN register, without teachers recognising the genetic basis for their slower processing (Loughborough University, 2025).

Objectives:

- To critically analyse the developmental, social, and environmental barriers on young children with Noonan Syndrome in the Early Years Curriculum.
- An in-depth exploration into an appropriate support strategy that professionals in EYFS might implement for children with Noonan Syndrome.
- Consideration into the effectiveness of providing inclusive practice, participation, and developmental progress in achieving positive outcomes.

Methodology:

This paper utilises Douglas *et al.*'s (2016) 'inclusive assessment framework' to consider whether students with Special Educational Needs and Disabilities (SEND) - such as those with Noonan Syndrome - are included in or excluded from the wider national curriculum. Despite legal mandates from The Equality Act 2010 (s 6.), Additional Learning Needs and Education Tribunal (Wales) Act 2018 (WG, 2018), and The Additional Learning Needs Code for Wales 2021 (WG, 2021), practical classroom support requires flexibility than policy suggests. Employing this framework allows us to challenge whether current assessment approaches are truly 'fair' and 'inclusive' to those pupils with SEND.

Inclusive Assessment Frameworks

- **Professional Efficacy:** Helps educators articulate reasoning clearly and meet diverse needs while maintaining academic rigor.
- **Limitations for NS:** Critics argue standard tools often fail to capture the small, specialized progress milestones unique to students with Noonan Syndrome.

Analysis:

'Results from the reference sample of COOL-2 show that, ... pupils with SEN are lagging behind in literacy and/or numeracy (17%), having a problematic attitude to work (15%), suffering from internalising disorders (13%), and having communication problems' (Ed Smeets *et al.*, 2016).

'In 2016-17, the Welsh Government has given local authorities a total of £4.102 billion through the RSG to deliver all of their services. This is a 1.3% decrease (54 million) from 2015-16, after adjusting for transfers into the settlement' (Welsh Government, 2016).

'There is also a concern raised in the literature that assessments can place undue pressure on students with SEND as they may be the students at greatest risk of performing and progressing least well.

Related to this, concerns exist that students with SEND are made scape goats and held responsible for a school's poor performance' (Douglas *et al.*, 2016).

Support in Place / Provision:

Differentiated Instruction

- **Tailored Learning:** Adapt activities, teaching methods, and assessments to meet individual needs and National Curriculum standards.
- **Task Management:** Break complex tasks into manageable steps and provide clear, simplified instructions.
- **Cognitive Support:** Reduce cognitive overload using visual aids and scaffolding to bridge the gap between guided and independent work.
- **Reinforcement:** Utilize repetition, modeling, and "overlearning" to support students with working memory or processing speed challenges.

Communication and Social Constructivism

- **Multimodal Communication:** Use Makaton (signs and symbols) to provide an alternative way for students to engage and communicate.
- **Memory Mapping:** Use physical gestures and an unhurried pace to help students "map" information into mental frameworks.

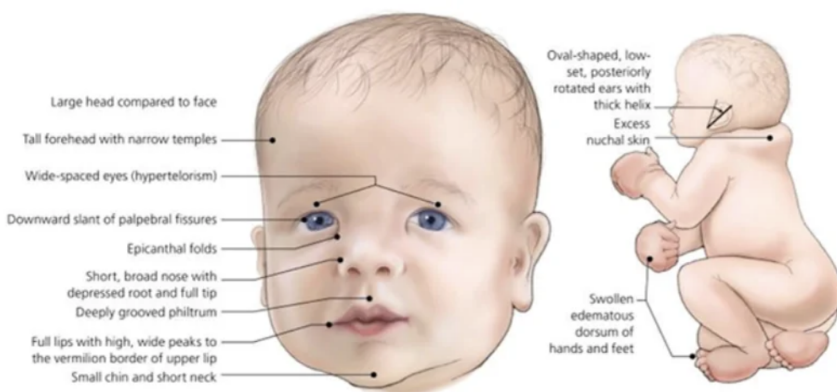
Professional Awareness and Inclusion

- **Specialized Knowledge:** Increase mainstream awareness through resources detailing the causes of NS and practical classroom management strategies.
- **Avoiding "Diagnostic Overshadowing":** Prevent reductive views of students by ensuring medical labels do not mask individual pedagogical needs or learning hurdles.
- **Active Inclusion:** Shift from passive awareness to active responsiveness, ensuring the school environment does not further disable the student.

Conclusion:

Support for children with Noonan Syndrome can be embedded in the EYFS, when grounded in inclusive, play-based pedagogy and aligned with the Curriculum for Wales.

However, its effectiveness may be limited by staffing capacity, funding constraints, and inconsistent specialist knowledge and confidence in managing rare conditions.



(cited by, 3billion, 2026)

Confirmation Statement – Use of Generative AI: I confirm that no generative AI has been used in the production of this assessment. All content, ideas, and writing presented in this work are entirely my own.