

## Briefing for the Public Petitions Committee

**Petition Number:** [PE1833](#)

**Main Petitioner:** Jade McDonald

**Subject:** Calls on the Scottish Parliament to urge the Scottish Government to help raise awareness of the learning disability 'dyscalculia'.

### Introduction

The petition is seeking greater visibility of dyscalculia. The background to the petition focuses on the experience of children and young people in school. This briefing will therefore do likewise.

### Definitions and identification

There is not a single definition of dyscalculia. The [Dyslexia Association](#) refers to two definitions found in 2001 Guidance from the UK Government and the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders.

Those definitions are:

“Dyscalculia is a condition that affects the ability to acquire arithmetical skills. Dyscalculic learners may have difficulty understanding simple number concepts, lack an intuitive grasp of numbers, and have problems learning number facts and procedures. Even if they produce a correct answer or use a correct method, they may do so mechanically and without confidence.”

(UK Government)

And:

“A specific learning disorder, an impediment in mathematics, evidencing problems with:

- Number sense
- Memorisation of arithmetic facts
- Accurate and fluent calculation
- Accurate math reasoning.”

(APA)

Importantly, dyscalculia is something more than just finding mathematics difficult. [The Cambridge Encyclopedia of Child Development, 2nd edition \(2017\)](#) noted “individuals with dyscalculia struggle in subitizing and calculating simple sums; they also have a poor sense of magnitude and limited abilities in solving arithmetic problems.” That entry also noted that a number of diagnostic tests have been developed.

“Defining dyscalculia is challenging, as the majority of individuals affected also suffer from other conditions such as attention-deficit hyperactivity disorder (ADHD) and dyslexia. Consequently, it is difficult to specify specific traits and/or mechanisms associated with dyscalculia alone. In fact, the existence of ‘pure dyscalculia’ has been debated, as those classified under this category are the minority. Importantly, research suggests that there is a myriad of individual differences at different and/or multiple levels: biological (e.g., atypical neural profile), cognitive (e.g., memory), and behavioral (e.g., anxiety), further complicating the definition of this condition.”

[Dyslexia Scotland stated in a factsheet:](#)

“It is estimated that dyscalculia affects 4 – 6% of the population and it often co-occurs alongside other specific learning difficulties such as dyslexia and dyspraxia. Just as there is no single set of indicators that characterises dyslexia, there are a number of areas which can cause dyscalculic difficulties.”

The same factsheet provided details of the “signs of dyscalculia” for practitioners in pre-school, primary and secondary settings.

## **Additional Support for Learning**

The [Education \(Additional Support for Learning\) \(Scotland\) Act 2004](#) provides that a person has ‘additional support needs’ if *for whatever reason*, they are unlikely to be able to benefit from school education without additional support.

Education authorities have a number of duties under the 2004 Act, including to identify children and young people’s additional support needs (s6) and then to “make adequate and efficient provision for such additional support as is required by that child or young person” unless this would incur unreasonable expenditure. (s4)

The [Scottish Government produced updated statutory guidance on the 2004 Act in December 2017](#). This guidance sets out the duties on education authorities and other agencies to support children’s and young people’s learning. It also sets out arrangements for avoiding and resolving differences between families and education authorities.

The duties under the act can apply to a very wide set of additional support needs or conditions. The guidance does not set out in detail how to support

children with one additional support need or another. It also notes that providing support does not require a formal diagnosis.

The [Autism Toolkit](#), which is funded by the Scottish Government and managed by Education Scotland, includes numeracy resources specifically designed to help children and young people with dyscalculia. The Scottish Government also funds [Call Scotland which provides advice and resources relevant to this petition](#), which provides advice and resources, relevant to this petition.

## **Policy interest**

As a policy area, Additional Support for Learning has received significant attention this parliamentary session, particularly by the [Education and Skills Committee](#).

An independent review of ASL was announced by the Scottish Government in January 2019 and led by Angela Morgan, former chief executive of youth support charity Includem. The review report, '[Support for Learning: All our children and All their Potential](#)' was published in June 2020. In response, the [Scottish Government published an Additional Support for Learning: Action Plan on 21 October](#). The Scottish Government stated that it, COSLA and ADES are "collaborative partners in this action plan".

**Ned Sharratt**  
**Senior Researcher**  
**20 November 2020**

SPICe research specialists are not able to discuss the content of petition briefings with petitioners or other members of the public. However, if you have any comments on any petition briefing you can email us at [spice@parliament.scot](mailto:spice@parliament.scot)

Every effort is made to ensure that the information contained in petition briefings is correct at the time of publication. Readers should be aware however that these briefings are not necessarily updated or otherwise amended to reflect subsequent changes.

Published by the Scottish Parliament Information Centre (SPICe), an office of the Scottish Parliamentary Corporate Body, The Scottish Parliament, Edinburgh, EH99 1SP