

The Use of a Table Square as a Reasonable Adjustment in Mathematics for Students with Dyslexia and Other Specific Learning Difficulties

There is no doubt that those individuals who can achieve mastery of automatic multiplication fact recall and manipulation are at an advantage as they can perform many mathematical processes speedily and with ease. We all wish this was achievable by everyone, but unfortunately this is not so.

In the same way that we do not ask those with a hearing-impairment to “just listen more carefully” or wheelchair users to “practise running around”, it is important that those with ‘hidden’ specific learning difficulties are not asked to use inappropriate learning strategies, to avoid discrimination under the 2010 Disability Act and to meet the criteria of the SEN Code of Practice.

The learning of multiplication facts is a stressful, largely unproductive and unnecessary activity for students with weak working memory and those who process verbal and/or visual information more slowly than their peers.

It becomes evident quite early if a child is struggling to master these skills and, however well-meant or imaginatively presented, activities intended to practise quick recall (e.g. Times Tables Rockstars) are neither appropriate nor successful.

Practice does not remediate the underlying difficulties which prevent efficient retention, recall and manipulation of mathematical facts and leads to short-term gain only, frustration and low self-esteem. Even those who can remember facts in isolation find that these are not transferrable to general maths work and the load on working memory results in partial or incorrect recall and unsuccessful outcomes. This is particularly true if students are expected to work at speed or to use “mental maths” strategies.

Poor tables recall does not correlate with maths ability and can so easily be overcome with the use of a 10 x 10 table square. This then provides a “level playing field” on which students can develop their mathematical skills appropriately and enables them to concentrate on the wider conceptual and problem-solving aspects of maths. Thus, the whole subject becomes more rewarding and enjoyable. The table square can be used for all mathematical processes requiring multiplication facts including, but not exclusively, work involving multiplication, division, fractions, ratio, number properties and algebra.

Where this practice has been supported, students have consistently achieved at expected or above expected levels at the end of Key Stage 2 and obtained excellent grades at GCSE and beyond.

We have a duty to remove barriers and to encourage independence and confidence, as stated within the SEN Code of Practice. Therefore, a table square should be readily available whilst undertaking any maths work within the classroom, for homework and for all non-formal tests and exams. Its use should be encouraged and not seen (even inadvertently) as “cheating” or evidence of lack of mathematical ability.

The table square has been used, very successfully, by some teachers as a whole class teaching strategy providing a visually supported, non-stressful learning experience for all, with each child using it as long (or as little) as they need it.

It is important that information regarding the use of a table square as a reasonable adjustment is not lost during transition between primary and secondary schools, so that early assessment in the new school does not result in students being placed in inappropriate teaching groups.

The availability of a table square remains vitally important as the complexity of work increases through school. From our experience, those studying at the Higher level for GCSE are often hampered by the lack of simple table knowledge despite the more demanding concepts being well within their grasp. We have seen many such students proceed to successful further study and maths-based careers.

Currently, students are not allowed to take pre-prepared table squares into formal tests or exams, such as end of Key Stage SATS or GCSE. However, to ensure an accurate reflection of their level of understanding and ability, it is vital that these students do have access to them on these occasions. For this reason, it is important that they are able to produce the table themselves. At an appropriate time for each student, they can be shown how to construct the table from patterns and, with practice, this replication can usually be achieved in under 4 minutes. Under test/exam conditions, this is facilitated by the provision of 1cm squared paper for which permission should be sought for Year 6 SATS and for GCSE exams (and for the latter, recorded on the Form 8 as centre-approved, normal way of working).

We would all like every student to become a confident and proficient mathematician. For those with dyslexia and other specific learning difficulties, the table square is a simple and inexpensive tool which can make the difference between failure and achieving this outcome.

For further information and advice, please

visit www.sheffielddyslexiacentre.org.uk/Information/Maths at SDC or email info@sheffielddyslexiacentre.org.uk

Mrs Karen Anderson (Specialist Teacher and Assessor) B.A (Hons). Education and Audiology (University of Manchester); P.G. Certificate in Special Educational Needs, (Huddersfield Polytechnic); P.G. Diploma (Level 7) in Specific Learning Difficulties (Dyslexia), Dyslexia Institute, by University of York; Associate Member British Dyslexia Association (A.M.B.D.A.); Member of the Dyslexia Guild (MDG); Member of the Professional Association of Teachers of Students with SpLD (PATOSS); Assessment Practising Certificate 0911/293
Author of STEPS Multisensory Maths Programme (Dyslexia Action).