

Evidence-based practice

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RESEARCH

Evidence-based practice: the use and abuse of research

PETER IMRAY, LILA KOSSYVAKI and MIKE SISSONS

The authors of this position paper argue that there is currently very little evidence-based practice in relation to learners with severe learning disabilities (SLD) and profound and multiple learning disabilities (PMLD), and that which there is, has often been badly used and/or abused. More specifically, we argue that relevant educational research undertaken so far has a strong tendency towards: (i) conflating the need for common strategies to be universally used in teaching, with the ‘need’ for a common curriculum; (ii) quoting research that applies to children with certain types of SEND as though it applies to all children with SEND; (iii) assuming there is a homogeneity of learning disability among people with the same condition (for example Down’s syndrome, autism) and (iv) encouraging assumptions that any academic progress, no matter how small the gain, is axiomatically superior in value for all pupils. The authors conclude that there is need for a new look at ‘evidence-based practice’ for these populations. Key words: profound, severe, complex, learning difficulties, learning disabilities, intellectual disabilities, evidenced based teaching, research.

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Introduction

One of the current hot phrases in education is ‘evidence-based practice’, and why would this not be so given the perversity of arguing against what has been tried and tested. Evidence-based teaching strategies have been defined as

clearly specified teaching methods that have been shown in controlled research to be effective in bringing about desired outcomes in a delineated population of learners. (Mitchel and Sutherland, 2020, p. 3)

On first reading, this might seem to be clear; but if ‘*controlled research*’ is the only methodology allowable, if ‘*desired outcomes*’ are not agreed and if ‘*delineated populations*’ are ignored or poorly defined, the efforts to create such purely scientific educational perspectives will be called into question. As noted by Pring (2004), Porter (2005), Norwich (2013), Ware (2014) and Imray and Colley (2017), there really are insufficient academic studies to form a purely evidence based opinion on anything related to severe learning disabilities (SLD) or profound and multiple learning disabilities (PMLD). Those of all ages with such levels of learning disability, and especially those of school age, are nonetheless, routinely included in such hubristic statements as ‘*all children can learn to read and write*’ (Erickson and Koppenhaver, 2020, p. 3), without explaining what the words ‘read’ and ‘write’ mean.

One can easily see that such an assertion can have an enormous influence on teachers, who are now destined to question their own competence, irrespective of the complexity of learning disability that might be related to the children in their class. In special (specialist) schools, where *all* of the pupils might have very complex learning disabilities, the problem multiplies exponentially. All teachers must of course constantly question their own competence, but does the research enable and facilitate such questioning, or does it obfuscate and confuse?

To answer this question, we need to look in detail at the problems facing research based evidence relating to PMLD and SLD. They broadly fall into four categories.

Conflating the need for common strategies to be universally applied for all teaching, with the need for common curricula content to be universally applied for all teaching

In their exhaustive meta-analysis entitled *What Really Works in Special and Inclusive Education*, Mitchel and Sutherland (2020) assert that their aim is to assist teachers to use the ‘*best available evidence*’ (p. 3) and whilst they are insistent that one size does not fit all, they argue that certain common elements of effective teaching are universal. Quoting Siraj-Blatchford *et al.* (2011), they note that teachers who are effective in teaching disadvantaged learners routinely demonstrate skills in a bundle of strategies, such as having excellent organisational skills, establishing a positive classroom environment, personalising their teaching, using evaluative feedback and making regular use of plenary sessions in class. Such generalist teaching strategies are redolent of the ‘*teacher craft knowledge*’ noted within Inclusive Pedagogy (Florian and Black-Hawkins, 2013, p. 815) and undoubtedly mark out what the ‘good teacher’ does routinely, with all pupils. This point is re-enforced by Mitchel and Sutherland in their claim that

with some exceptions, there are no disability-specific teaching strategies. Most of the strategies (presented) in the book are relevant to all learners with additional education needs – indeed, to all learners. (Mitchel and Sutherland, 2020, p. 8)

And herein lies a problem, because Mitchel and Sutherland are exploring *how* one teaches, not *what* one teaches, and if the what of teaching is irrelevant, too easy, too hard, unmotivating, unconcerned with individual learners’ engagement, pedagogically uniform, only admitting of specific, linear and academic outcomes, it will naturally exclude those with PMLD and SLD, that is the 1% or 2% of the school population (Pinney, 2017) who *all* repeatedly fail to achieve in *all* national curriculums or common-core standards curriculum models in *all* countries (Imray and Colley, 2017).

Mitchel and Sutherland’s claim for there being ‘*no disability-specific teaching strategies*’ is, in turn, based on their referencing of Lewis and Norwich’s (2005) *Special Teaching for Special Children?* This latter work can be seen as a landmark work in relation to alternative and different pedagogy for those with SEND, because it appears to indicate that there is no justification for assuming that pedagogic difference is in any way significant for any particular group of learners. That is, it adopts a ‘*unique differences*’ position which accepts that individual learners may well have

differences that are unique to them as individuals (a reflection on all children being different) but rejects the notion that particular definable groups of learners display differences which could engage with different pedagogic notions. Their argument is that all children broadly learn the same way, even though that may be on a continuum.

Lewis and Norwich assembled an impressive band of experts in the various elements of SEND, including Jean Ware (PMLD), Jill Porter (SLD), Jennifer Wishart (Down's syndrome [DS]) Felicity Fletcher-Campbell (MLD) and Rita Jordan (ASD), who all agreed that (i) what research there is seems to indicate that a different pedagogical stance is not justified for different learning difficulties and (ii) that their individual and expert opinions are that a unique position is largely acceptable.

There were clear areas of uncertainty with several chapters indicating

that curriculum commonality could only be at the broadest level of common principles, as otherwise the diversity of educational needs would call for specialization. (Lewis and Norwich, 2005, p. 209)

Only Jordan openly questioned the concept of universal curriculum design, and though others did not go so far, Ware, Porter and Wishart were particularly cautious in their opinions. Crucially, however, Lewis and Norwich were asking their experts to judge on the need for a different 'how', not a different 'what'.

In asking whether pupils with special educational needs require distinct kinds of pedagogic strategies, we are not asking whether pupils with special educational needs require distinct curriculum objectives. *We are asking whether they need distinct kinds of teaching to learn the same content as others without special educational needs.* (Norwich and Lewis, 2005, p. 7, our emphasis)

The emphasis for Lewis and Norwich is on learning the same content, and as this is so, it is a notion with which it is extremely difficult to argue. The authors of this paper are not, however, asking whether those with PMLD and SLD need distinct kinds of teaching to learn the *same* content as others without special educational needs, because we accept that learning the *same* content is, and always has been, impossible for all of these learners, irrespective of their chronological age. The ten year longitudinal experiment conducted by Durham University, expounded by Ndaji and Tymms (2009) and supported by the Rochford Review (Rochford, 2016) is very clear. The profundity of their learning difficulties ensures that those with PMLD will not progress even into the beginnings of England's National Curriculum and the

severity of the learning difficulties experienced by those with SLD will limit their involvement to the earliest stages of the National Curriculum, perhaps at the very best, the equivalent to that attained by averagely developing children at Year 2 (age 7).

However, the clear emphasis on making progress within the *same* curriculum allows Mitchell and Sutherland (2020) to reference Lewis and Norwich in their assertion that

... there is little evidence to support the notion of disability-specific teaching strategies, but rather that all learners benefit from a common set of strategies, even if they have to be adapted to take account of varying cognitive, emotional and social capabilities. (Mitchel and Sutherland, 2020, p. 7)

This view is consistent with earlier iterations when, for example Davis and Florian (2004) described discussions on real pedagogical differences for different groups of learners as being ‘*unhelpful*’. This, however, merely emphasises the grip of the notion of a *national* curriculum, even if that national curriculum is a common core standard one as in the USA, for example in that the single solution to all difficulties and the ‘right’ of all children to access this single solution has been firmly suppressing any opportunity to think otherwise. The moral correctness of an inclusionist doctrine has effectively throttled experiment, and it is difficult to contemplate how research can be contemplated when no alternatives to the established are allowed. The authors of this paper call for a new initiative in educational research and reference a forthcoming publication (anonymised for the peer review process) which celebrates classroom evidence based practice. The teachers who are writing nine of the chapters in this forthcoming publication have, however, experimented despite the system not because of it. This cannot be a healthy state of affairs.

Overgeneralising research findings by quoting research that applies to some children, young people and adults (CYPA) with SEND as though it applies to all CYPA with SEND

A very recent iteration of England’s ‘government policy’ on Literacy in schools, namely *The reading framework: Teaching the foundations of literacy* (DfE, 2022), claims to

concentrate on good practice for those with moderate to severe SEND and complex needs, most (but not all) of whom will be in specialist provision. (DfE, 2022, p. 55)

It also states that

children with profound and multiple learning difficulties (PMLD) ... might access alternative activities to teach children how letters correspond to sounds within the context of a pre-formal sensory curriculum. (DfE, 2022, p. 57)

and

consensus is growing among academics and teachers that the best reading instruction for children with SEND is SSP (systematic synthetic phonics), taught by direct instruction. They can learn to read and write and can make progress towards or attain functional literacy. (DfE, 2022, p. 55)

That a ‘*consensus is growing*’ might not be a contentious statement for ‘*children with SEND*’ but we are not clear where the consensus is or indeed whether it exists at all for those with severe and profound learning difficulties. There is, however, absolutely no research evidence to suggest that those with SLD and PMLD can be taught to *master* SSP. Rose (2006) is clear, mastery of the phonics model is essential if children are to become fluent readers, but if not everyone is able to become a fluent reader, a different model to phonics needs to be applied (Imray and Sissons, 2021). And this makes no difference whether it is taught in mainstream or special(ist) settings; it does not matter whether such schools and/or teachers are good or outstanding; it makes no difference which schema is used. There simply is no evidence.

Nonetheless, the DfE’s 2022 paper quotes ‘evidence’ (five separate studies are referenced) and we are obliged to look closely at this ‘evidence’ because the lessons are salutary.

Quoted study 1

Sermier Dessemontet *et al.* (2021) look at the effects of a phonics-based intervention on the reading skills of students with intellectual disability. It is a very recent study and does indeed clearly indicate that those with SLD (both the control and ‘treatment’ groups had a mean chronological age of 9 years) can make progress with a regular small group systematic synthetic phonics programme. The problem lies in what sort of progress; that is pupils may be able to make statistically significant progress with intensive specific tutoring and still be unable to read fluently, because they have come from a very

low starting point. This study indicated that improvements could be made in decoding some CV, CVC, CCVC and CVCC words but this is still at a very early (neuro-typical 5 and 6 years old) level, and the learners were 9 years old. In other words, making marginal improvements in phonic de-coding does not assume that phonic *mastery* is possible, and phonic mastery is a necessary condition of being able to read fluently (Rose, 2006).

Quoted studies 2 and 4

Both Arciuli and Bailey (2021) and Trembath *et al.* (2015) are studies relating to autism, with no indication in either study that any of the learners had severe or complex learning disabilities. It is therefore impossible to draw conclusions from either. This is a massively common problem with research relating to SEND, when research is quoted by others as applying to *all* SEND. We do not blame the authors of the original studies, they are very clear as to their study groups, but it is crass to assume causal links when none can be drawn. These studies do not relate to SLD and PMLD and should not be quoted as though they do.

Quoted study 3

Dehaene (2009) is quoted by the DfE as stating that

... it is simply not true that there are hundreds of ways to learn to read. Every child is unique ... but when it comes to reading we all have roughly the same brain that imposes the same constraints and the same learning sequence. (DfE, 2022, p. 56)

Firstly, this passage derives from a chapter entitled *The Dyslexic Brain* which is of course, a specific learning difficulty not a global learning difficulty and bears as much relationship to SLD and PMLD as chalk might to cheese. Secondly, we do not all have '*roughly the same brain*' in that some will find it easier than most, most will be able to achieve fluency given time and effort, but a small few (the 1% or 2% of children with SLD and PMLD) will not be able to overcome these learning difficulties (Imray and Sissons, 2021), and again there is absolutely no evidence to suggest that they can.

Quoted study 5

Finally, Cologon (2013) notes that for children with DS

sight-word learning on its own is insufficient for reading development, and teaching with this approach alone is contrary to current evidence-based practices in literacy instruction. (p. 135)

Again, this is clear and we would not dispute it. To our knowledge, there is no research evidence to suggest that sight-word reading *on its own* is sufficient to achieve reading *fluency* for those with DS, or anyone else for that matter. Cologon's article does however, through an extended four-year long, single pupil study, suggest that synthetic phonics can be taught and can be learned by all. The results are impressive, with the single pupil, Ashley, having a reading age of 6 when he was 8, and a reading age of 10.5 when he was 12.5, as a result of applying a systematic synthetic phonics programme. Once again, however, there are problems in the interpretation of this research as applying to *all* with SLD and PMLD, which is what both Cologon and the DfE's paper imply. Firstly, this is a single-child study (and these are always going to be difficult to generalise from) but even more problematically, there is no indication from Cologon as to the level of learning difficulty experienced by Ashley. There is a considerable amount of research relating to those with DS, but we must be careful of assuming a learning difficulty commonality. Children, young people and adults with DS are a heterogeneous group in terms of the level of learning difficulty with most working within the mild to moderate range (Chapman, 2003). Ashley's level of learning difficulty is not mentioned, yet the DfE feel sufficiently emboldened by this (and similar) research to state that Systematic Synthetic Phonics

rather than a whole-word approach, provides children with moderate to severe and complex needs the best opportunity to gain functional literacy. (DfE, 2022, p. 56)

Once again, there is no evidence to suggest that *any* approach will provide children with severe and complex needs with sufficient expertise to gain functional literacy. That is, there is evidence to suggest that Ashley, *one* pupil with DS, has an opportunity to gain functional literacy, but not that *all* children with severe and complex needs can gain functional literacy using the same approach.

The DfE 2022 paper is entirely typical of general articles which reference specific studies. That is, the claim that *certain* pupils can make *some* reading/writing progress, is then quoted to make a general point, that *all* pupils, irrespective of the level of learning difficulty experienced, can achieve fluency and functionality in reading and/or writing. Detailed analysis occasioned by going back to the original studies reveals this generalist claim to be patently untrue. The authors' personal experiences (with a combined 80 years plus teachers of children, young people and adults with SLD and PMLD) tells us it is not possible for such learners to achieve fluency in reading. If they could, they would not have SLD and PMLD (Imray and Hinchcliffe, 2014). That is, not just that we have been unable to teach it, but we have never seen it done by any other teacher either. We do not want to close our minds to the idea that it is possible to teach *everyone* to read and write fluently, but clearly, knowing what we know at present, there is absolutely no evidence for assuming it, and why would we want to continue teaching a subject for which there is absolutely no evidence base?

Whilst the arguments noted here may appear to be entirely negative, concentrating as they do on what pupils cannot do, it seems to us that this is an essential first step. Once we clear our minds of trying to teach the unteachable, we can concentrate on what pupils can do. Those with SLD and PMLD can achieve great things, especially in the areas of Communication, Independence, Social Relationships, Self-Regulation, Thinking and Problem Solving and Creativity, all areas of learning focussed on within the Equals Multi-Tiered Curriculum Approach (Equals, 2020a), but their chances of achieving in such areas will be seriously impaired if we continue to waste most of their precious time in education on pointless literacy (and numeracy) goals.

Being insufficiently precise on the level of learning difficulty being experienced by the learner(s) being researched, thus, for example quoting research related to learners with Rett's syndrome or Down's syndrome, or even more commonly autism, as though there was a homogeneity of learning disability within each

We can clearly see this effect in the use of four of the five studies quoted above, but it seems to be a common difficulty. Mitchel and Sutherland (2020) reference 352 world-wide, school aged studies, and go into some detail on each of the strategies and suggestions detailed in the research. Unfortunately, only 17 (that is <5%) actually mention severe learning difficulties or disabilities,

or indeed other terms sometimes used outside of the UK such as severe disabilities, intellectual disabilities or even mental retardation (sic). None at all mention PMLD.

There has, for example, been a considerable amount of research relating to children, young people and adults with DS, particularly relating to successful early literacy and numeracy interventions (Turner *et al.*, 2008; Hulme *et al.*, 2013; Roch *et al.*, 2013; de Graaf and van Hove, 2015 for example). Wishart (2005), however, posits that final levels of achievement do not show any commensurate rise in that there is (at best) only weak evidence of any substantial or long-lasting cognitive benefits.

Part of this may touch on an apparent aversion to labelling (Anderson and Boyle, 2015; Trussler and Robinson, 2015; Briggs, 2016; Robinson and Goodey, 2017; Slee, 2018 for example), which is an odd and debilitating juxtaposition to evidence-based teaching. How does one evidence effective practice if we cannot define who we are evidencing? Loose and disparate terms (or no terms at all) will only confuse and obfuscate, unless of course one believes that there are no differences between any learners, as implied by the Lewis and Norwich arguments noted above. Following such arguments, NASEN (the largest non-governmental organisation for SEND in the UK) advises teachers to be ‘*wary of labelling learners with their diagnosis ... or by assumptions of what they cannot do, particularly learners with SEND.*’ (NASEN, 2022, p. 35).

Firstly, *assuming* what learners cannot do is clearly a bad thing. *Knowing* what learners cannot do (because it has been tried over and over again, over several years without success) is a good thing, because it prevents endless and pointless repetition of unachievable goals. We all want to concentrate on the positive option of teaching what learners can do, but first we have to know what they have repeatedly, consistently and over time failed at. Why is there merit in constantly repeating failure?

Secondly, the NASEN observation directly implies that teachers can learn nothing from knowing that a learner has severe or profound learning disabilities, or indeed, worse than nothing if all labels are seen to be negative. And this may also lead to ‘non-labels’ such as NDD (neurodiverse developmental disorders) (Lindley-Baker and Mills, 2022), which is both uncertain and undefined, and thus creates serious interpretation difficulties. Of course all children’s development is diverse and different, but some, especially those at the extreme ends of academic performance distribution, are very different and what is more will not suddenly become something else. Where is the research evidence to suggest that learners who have severe learning disabilities

suddenly become learners without severe learning disabilities? Once again, such evidence does not exist. There may well be a few examples of misdiagnosis, but there is no evidence that misdiagnosis is common.

Allocating learners to a certain grouping of learning difficulty, such as severe and profound, enables organisation, specialisation and commonality of curriculum. There is a reason for saying ‘*this child but not that one*’ (Kauffman, 2022), because to not do so defies simple logic and makes a mockery of resource allocation, expertise, support, and indeed, the whole process of including all children in the process of education. Giving children an education simply because they have a right to it is only half of the equation. We must consider whether it is a meaningful and functional educational experience to each and every individual. Not thinking what they are going to do with that education is downright irresponsible, especially towards the learners themselves.

Encouraging the assumptions that any academic progress, especially in the areas of literacy and numeracy, should always be the ultimate goal for all learners

There are not hundreds of these studies, but there are perhaps tens, and whilst it is impossible to name them all, a typical one would be the Sermier Dessemontet *et al.* (2021) study noted above. Here are two more examples.

In an article studying early reading skills with 57 children with DS aged between 6 and 10, Burgoyne *et al.* (2012) established statistically significant progress in early word recognition as a result of regular, daily, 40-min, one-to-one direct instruction using a phonic decoding methodology for 40 weeks (that is one scholastic year). The inference is of course, that teaching phonic decoding is an important and *significant* tool in improving literacy skills for all. We would not doubt this for those who will go on to read fluently, but this particular study showed an average gain of 4.5 new words compared to an average of 2 new words from the control group (also comprised of those with DS) not participating in the new phonic methodology. 40 min a day, demanding one-to-one time, for 40 weeks for an average of 2.5 new words decoded, strikes us as an inordinate amount of work, resources, energy, time and yes it might well be statistically significant, but it cannot be considered to be purposeful if the learner is no further down the line to becoming fluently literate.

In a similar study relating to numeracy progress, Lanfranchi *et al.* (2015) ask whether learning to count skills can be improved in children with DS, by instituting specific

mathematics strategies over an intensive 16-week cycle. To find out they conducted a study involving 27, 10- to 15-year-old students with DS, all of whom were attending mainstream schools. The students engaged with twice-weekly, 30-min training sessions over a period of 16 weeks, and the results were compared to a smaller, 9 student DS control group who did not receive the training. Apart from ‘*reading and writing numbers (1–19)*’ and ‘*linking lexical, semantic and pre-syntactic competence in order to count tens – hundreds – thousands*’ (Lanfranchi *et al.*, 2015, p. 132) all 11 ‘*goals*’ only involved the recognition and use of the numbers 1 to 10 inclusive, and it could be argued that counting 10, 20, 30 or 100, 200, 300 or 1000, 2000, 3000 is the same as counting 1, 2, 3 except for the language change; that is this linguistic and probably rote remembered skill does not imply an *understanding* of place value or an *understanding* of number, both necessary conditions for achieving even basic numerical competency (Buckley, 2007).

Nonetheless, the research demonstrated statistically significant progress for the specific training sessions, because as all experienced teachers of those with SLD will know, it is perfectly possible to make short term academic gains if one concentrates on a specific academic area intensively for a period of time. Repetition is the key to learning but the central question is, can this learning then be extended and developed over time, or will the limited progress made be the only progress made? The answer, we believe, lies in Lanfranchi *et al.*’s statement that a number of studies

have reported ... that individuals with DS understand cardinality principles and counting procedures just as well as typically developing children of the same MA (mental age). (Lanfranchi *et al.*, 2015, p. 130, our emphasis)

Not you will note, of the same chronological age (10 to 15) but of the same mental age, with an acknowledgement in the Lanfranchi *et al.* article that the 27 participants had ‘*a mean mental age of 5.4 years*’, an estimation well within the upper reaches of having a severe learning disability.

The point about this is that neuro-typical children of under 6 probably do not have a refined sense of counting procedures or cardinality (Nye *et al.*, 2001) though they will (very quickly) acquire these, and by the age of 7, at the end of Year 2, will have typically, *at least* acquired an understanding of all numbers up to 100, and the relationship of all numbers within the 100 block to each other (Standards and Testing Agency, 2020). Those with DS (and those with PMLD and SLD) have always demonstrated a very high degree of academic longitudinal stability (Burgoyne *et al.*, 2012); that is, the gap between the rapid progress made by neuro-typical learners

and those with DS tends to widen dramatically year on year, and the more academic the demands, the more dramatic the gap.

The authors' argument is therefore that evidence on short-term academic gains is only meaningful if the rate of progress is maintained over time. Sissons (2020) goes considerably further to argue that in order for *real* learning to be established it is crucial that we assess against four specific criteria, namely clear and demonstrable improvements in (i) independent application; (ii) fluency in use; (iii) maintenance over time; and (iv) the ability to generalise. Once again, there is no evidence of these gains in either of the studies noted above. Had the learners studied by Burgoyne *et al.* in 2012 and Lanfranchi *et al.* in 2015, been revisited in 2017 and 2020, and had the subsequent research found that functional literacy and numeracy had been achieved by the group (or even some of the group) this would have been interesting. Needless to say, no such studies have been reported, and these are not isolated cases. No such re-visits have been reported in *any* research which might include those with SLD and PMLD.

Conclusions

Clearly the ideal of evidenced based research informing educational practice is a sound one, but this ideal, at least in so far as it is able to apply to the effective teaching of those with profound and severe learning disabilities, is highly problematic. Sissons (2020) argues strongly that real learning (as opposed to partial, rote, temporal learning) is both longitudinal and lateral for all those with SLD and PMLD, who will and do, all struggle to show long term linear progress in academic subjects such as Mathematics and English. The authors of this paper are committed to challenging certain commonly held academic notions, and argue that (i) differentiating a National or Common Core Standards curriculum, written for neuro-typical, conventionally developing learners is not possible for those with SLD and PMLD; and (ii) it is not possible to redesign common (to all) curricula content as suggested by the supporters of Universal Design for Learning (Hall *et al.*, 2012) and Inclusive Pedagogy (Florian and Black-Hawkins, 2013) because the start is still the start and those with SLD and PMLD will only, at the very best, ever get to the start, no matter how many years they try for.

The concept of constantly 'teaching' CYPA to constantly fail has occasioned many special (specialist) schools in the UK to look towards curricula specifically written for learners of all ages with SLD and PMLD. As such they have adopted one or more

of the Equals Curricula which have been specifically written for those with SLD and PMLD. Equals (a not-for-profit educational charity based in the UK) has since 2016, concentrated on writing such curricula (Equals, 2018, 2020b for example), with the authors of this article being commissioned by Routledge to edit evidenced based, teacher led, real time, longitudinal research, demonstrating process-based progress in independence, maintenance, fluency and generalisation. All of the research chapters have a strong sense of Nussbaum's (2011) Capability Approach, with schools supporting their teachers to give control back to learners, encourage real learner voice and agency and facilitate all their learners to becoming the best they can be, and doing the best they can do, irrespective of individual ability or disability.

References

- ANDERSON, J. and BOYLE, C. (2015) Inclusive education in Australia: rhetoric, reality and the road ahead. *Support for Learning*, 30, 1, 4–22.
- ARCIULI, J. and BAILEY, B. (2021) The promise of comprehensive early reading instruction for children with autism and recommendations for future directions. *Language, Speech, and Hearing Services in Schools*., 52, 1, 225–238.
- BRIGGS, S. (2016) *Meeting Special Educational Needs in Primary Classrooms*. Abingdon: Routledge.
- BUCKLEY, S. (2007) Teaching numeracy. *Down Syndrome Research and Practice*, 12, 11–14.
- BURGOYNE, K., DUFF, F. J., CLARKE, P. J., BUCKLEY, S., SNOWLING, M. J. and HULME, C. (2012) Efficacy of a reading and language intervention for children with Down syndrome: a randomized controlled trial. *The Journal of Child Psychology and Psychiatry*, 53, 10, 1044–1053.
- CHAPMAN, R. S. (2003) Language and communication in individuals with Down syndrome. In L. Abbeduto (ed), *International Review of Research in Mental Retardation: Language and Communication*, Vol. 27, pp. 1–34. San Diego, CA: Academic Press.
- COLOGON, K. (2013) Debunking myths: reading development in children with Down syndrome. *Australian Journal of Teacher Education*., 38, 3, 129–151.
- DAVIS, P. and FLORIAN, L. (2004) *Teaching Strategies and Approaches for Pupils with Special Educational Needs: A Scoping Study*. Nottingham: DfES Publications.
- de GRAAF, G. and van HOVE, G. (2015) Learning to read in regular and special schools: a follow-up study of students with down syndrome. *Life Span and Disability*, XVIII, 1, 7–39.
- DEHAENE, S. (2009) *Reading in the Brain: The New Science of How We Read*. New York, NY: Penguin.
- DFE (2022) *The Reading Framework. Teaching the Foundations of Literacy*. [Online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1050849/Reading_framework_Teaching_the_foundations_of_literacy_-_July_2021_Jan_22_update.pdf]. Accessed 01/03/22.
- EQUALS (2018) *The Equals Semi-Formal Curriculum for Children, Young People and Adults with SLD and ML D*. Newcastle: Equals. [Online at www.equals.co.uk].
- EQUALS (2020a) *The Equals Multi-Tiered Curriculum Model*. Newcastle: Equals. [Online at www.equals.co.uk].
- EQUALS (2020b) *The Equals Informal Curriculum for Children, Young People and Adults with Complex Learning Disabilities (CLD)*. Newcastle: Equals. [Online at www.equals.co.uk].

- ERICKSON, K. A. and KOPPENHAVER, D. A. (2020) *Comprehensive Literacy for all*. Baltimore, MD: Paul Brookes Publishing.
- FLORIAN, L. and BLACK-HAWKINS, K. (2013) Exploring inclusive pedagogy. *British Educational Research Journal*, 37, 5, 813–828.
- Hall, T.E., Meyer, A. and Rose, D.H. (eds) (2012) *Universal Design for Learning in the Classroom: Practical Applications*. New York: Guildford Press.
- HULME, C., GOETZ, K., BRIGSTOCKE, S., NASH, H. M., LERVA, A. and SNOWLING, M. J. (2013) The growth of reading skills in children with Down syndrome. *Developmental Science*, 15, 3, 320–329.
- IMRAY, P. and COLLEY, A. (2017) *Inclusion Is Dead: Long Live Inclusion*. London: Routledge.
- IMRAY, P. and HINCHCLIFFE, V. (2014) *Curricula for Teaching Children and Young People with Severe or Profound Learning Difficulties*. London: Routledge.
- IMRAY, P. and SISSONS, M. (2021) A different view of literacy. *Support for Learning*, 36, 2, 222–237.
- KAUFFMAN, J. M. (2022) This one, not that one. In J.M. Kauffman (ed.), *Revitalizing Special Education: Revolution, Devolution and Evolution*. Bingley, Yorkshire: Emerald Publishing.
- LANFRANCHI, S., AVENTAGGIATO, F., JERMAN, O. and VIANELLO, R. (2015) Numerical skills in children with down syndrome. Can they be improved? *Research in Developmental Disabilities*, 45–46, 129–135.
- Lewis, A. and Norwich, B. (eds) (2005) *Special Teaching for Special Children? Pedagogies for Inclusion*. Maidenhead: Open University Press.
- LINDLEY-BAKER, J. and MILLS, L. (2022) Playing to learn: learning to talk. *British Journal of Special Education*, 49, 350–374.
- MITCHEL, D. and SUTHERLAND, D. (2020) *What Really Works in Special and Inclusive Education: Using Evidence-Based Teaching Strategies*, (3rd edition). Abingdon, Oxon: Routledge.
- NASEN (2022) *Teacher Handbook: SEND. Embedding Inclusive Practice*. [Online at <https://nasen.org.uk/news/teacher-handbook-launched>]. Accessed 19/07/22.
- NDAJI, F. and TYMMS, P. (2009) *The P Scales: Assessing the Progress of Children with Special Educational Needs*. London: Wiley-Blackwell.
- NORWICH, B. (2013) *Addressing Tensions and Dilemmas in Inclusive Education*. London: Routledge.
- NORWICH, B. and LEWIS, A. (2005) How specialized is teaching pupils with disabilities and difficulties? In A. Lewis and B. Norwich (eds), *Special Teaching for Special Children? Pedagogies for Inclusion*, pp. 1–14. Maidenhead: Open University Press.
- NUSSBAUM, M. C. (2011) *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Belknap Press.
- NYE, J., FLUCK, M. and BUCKLEY, S. J. (2001) Counting and cardinal understanding in children with Down syndrome and typically developing children. *Down Syndrome Research and Practice*, 7, 2, 68–78.
- PINNEY, A. (2017) *Understanding the Needs of Disabled Children with Complex Needs or Life-Limiting Conditions*. London: Council for Disabled Children/True Colours Trust.
- PORTER, J. (2005) Severe learning difficulties. In A. Lewis and B. Norwich (eds), *Special Teaching for Special Children? Pedagogies for Inclusion*, pp. 53–66. Maidenhead: Open University Press.
- PRING, T. (2004) Ask a silly question: two decades of troublesome trials. *International Journal of Language and Communication Disorders*, 39, 3, 285–302.

- ROBINSON, R. and GOODEY, C. (2017) Agency in the darkness: ‘fear of the unknown’, learning disability and teacher education for inclusion. *International Journal of Inclusive Education*, 22, 4, 426–440.
- ROCH, M., FLORIT, E. and LEVORATO, C. (2013) The role of linguistic context in deriving word meanings in individuals with down syndrome. *Research in Developmental Disabilities*, 34, 1, 605–613.
- ROCHFORD, D. (2016) *The Rochford review: final report. Review of assessment for pupils working below the standard of National Curriculum Tests*: Standards and Testing Agency. [Online at www.gov.uk/government/publications/rochford-review-final-report].
- ROSE, J. (2006) *Independent Review of the Teaching of Early Reading*. Nottingham: DfES.
- SERMIER DESSEMONTET, R., DE CHAMBRIER, A.-F., MARTINET, C., MEULI, N. and LINDER, A.-L. (2021) Effects of a phonics-based intervention on the reading skills of students with intellectual disability. *Research in Developmental Disabilities*, 111, 1–10.
- SIRAJ-BLATCHFORD, I., SHEPHERD, D. L., MELHUISE, E., TAGGART, B., SAMMONS, P. and SYLVA, K. (2011) *Effective Primary Pedagogical Strategies in English and Mathematics in Key Stage 2: A Study of Year 5 Classroom Practice Drawn from EPPSE 3016 Longitudinal Study*. DfE – RB129. London: Department for Education.
- SISSONS, M. (2020) *Mapp (Mapping and Assessing Personal Progress): Semi-Formal Model*. Newcastle: Equals.
- SLEE, R. (2018) *Inclusive Education isn't Dead, it Just Smells Funny*. London: Routledge.
- STANDARDS AND TESTING AGENCY (2020) *National Curriculum Assessments: Pre-Key Stage 2: Pupils Working Below the National Curriculum Assessment Standard*: Teacher Assessment Framework. [Online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903553/2021_Pre-key_stage_2_-_pupils_working_below_the_national_curriculum_assessment_standard_PDFA.pdf]. Accessed 24/08/22.
- TREMBATH, D., VIVANTI, G., IACONO, T. and DISSANAYAKE, C. (2015) Accurate or assumed: visual learning in children with ASD. *Journal of Autism Developmental Disorder*, 45, 10, 3276–3287.
- TRUSSLER, S. and ROBINSON, D. (2015) *Inclusive Practice in the Primary School*. London: Sage.
- TURNER, S., ALBORZ, A. and GAYLE, V. (2008) Predictors of academic attainments of young people with Down’s syndrome. *Journal of Intellectual Disability Research*, 52, 5, 380–392.
- WARE, J. (2014) Curriculum considerations in meeting the educational needs of learners with severe intellectual disabilities. In L. Florian (ed), *The Sage Handbook of Special Education*, 2nd ed., pp. 491–503. London: Sage.
- WISHART, J. G. (2005) Children with down's syndrome. In A. Lewis and B. Norwich (eds), *Special Teaching for Special Children? Pedagogies for Inclusion*, pp. 53–66. Maidenhead: Open University Press.

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