

EVIDENCE INFORMED PRACTICE FOR
AUTISM, SPECIAL EDUCATIONAL NEEDS
AND DISABILITY IN SCHOOLS

Evidence informed practice for
autism, special educational needs
and disability in schools: expanding
the scope of the research learning
community model of professional
development

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Research learning communities (RLCs) are an increasingly popular form of collaborative professional development that takes participants into deep engagement with research evidence and empowers them to become researchers themselves. This study describes the use of the RLC model to make research about autism and school system change accessible to teachers in primary schools. An interdisciplinary team of specialists guided teams made up of a school leader and a class teacher through structured engagement with recent, high quality research. Participants devised and trialed evidence-informed

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interventions that supported pupils with autism and facilitated the improvement of whole school policy and practice on special education and disability (SEND). The RLC allowed them space to share their experiences with other teachers in a process of mutual reflection and learning. Evaluation showed that participants gained confidence in leading change and made effective use of research to develop SEND school policy and practice.

Key words: evidence-informed practice, autism, special educational needs, professional learning community.

Introduction

This article describes the methodology and rationale of an autism-focused Research Learning Community (Brown, 2017), which used an innovative interdisciplinary team approach to support teachers and Special Needs and Disabilities (SEND) leaders to improve the learning and wellbeing of target pupils in their schools. It explores the challenges experienced and reports on the impact of the project on teachers' learning and the outcomes for individuals and schools. Based on participant views and experiences, it discusses the potential of the Research Learning Community model for future SEND-focused professional development projects.

Background and rationale

Developing engagement with research

Since Goldacre's (2013) claim that education lags behind other professions in any systematic use of evidence, there have been numerous calls (e.g. Brown, 2015; DfE, 2016) for teachers to be more engaged both in and with research. However, barriers to achieving this include the inaccessibility of research, such as in the use of sometimes complex and academic language (e.g. Nutley *et al.*, 2007; Brown, 2013) A central national initiative designed to address these issues in England is the Teacher Toolkit provided by the Education Endowment Fund (EEF, n.d.) which, since 2011, has provided summaries of a range of evidence, specifically designed for use by teachers. This mirrors similar initiatives in other territories, such as the Evidence for ESSA website in the US (Centre for Research and Reform in Education, 2019).

However, there are counter arguments which challenge the effectiveness and appropriateness of a too closely conceived approach to evidence-based practice in schools. Notably, Biesta (2010, 2017) questions whether the ‘what works’ model of evidence-engagement devalues teachers’ professional judgment or what might be called ‘practice expertise’, since it is based on narrow conceptions of teaching and school improvement. Summarising responses in the literature to these concerns, Godfrey (2017) distinguishes three approaches to engagement:

- ‘evidence-based practice’, a passive process in which teaching approaches are based on evidence about ‘what works’ produced by academics;
- ‘evidence-informed practice’, when teachers actively combine evidence from academic research, practitioner enquiry, such as lesson study or action research, and other school-level data;
- ‘research-informed practice’, when teachers engage in and with academic and practitioner forms of research, using evidence from both to make changes to practice.

A vein of studies in the literature highlights potential benefits to teachers from research-informed practice. These include increased professionalism (Furlong, 2014), improved attitudes to learning and renewing practice (Cain, 2015; Greany and Maxwell, 2017), improved pupil outcomes (Cordingley, 2015), and school and system performance (Supowitz, 2015). However, a number of studies (e.g. Greany and Maxwell, 2017; Brown and Poortman, 2018) also note that time pressures mean only a subset of teachers can engage in the research elements of research-informed practice school-based research at any time, so participants must disseminate findings to colleagues to have an impact on whole school practices (Greany and Maxwell, 2017; Brown and Poortman, 2018).

The RLC model

The RLC model presents an opportunity to address the concerns above. First conceived by Brown (2017) as part of an Education Endowment Foundation (EEF) initiative to enable the roll-out of research-informed interventions at scale, RLCs were originally trialled in 55 primary schools in England as part of a randomized control trial organized and funded by the EEF. Brown (2017) notes that RLCs are communities in which groups of teachers come together to engage with research to enhance not only their practice, but also the practice of their colleagues. Participants send a senior or middle leader and a class teacher to four whole-day workshops across a year, in which they are supported through a cycle of inquiry that explores strategies for sharing research knowledge with school colleagues

between workshops and to roll out new approaches to learning and teaching (Brown, 2017). Research informs the design of the cycle, the strategies for knowledge-sharing and the exploration of approaches to learning and teaching.

Methodology

The SEND RLC model

A powerful rhetoric around most professional development targeted at special educational needs and disability (SEND) insists on its support for evidence-based practice (see Mintz and Wyse, 2015; Mintz, 2019; Mintz *et al.*, 2020). However, decisions about pupils with SEND in England typically take place in what we might call ‘micro-learning communities’ led by a SEND Coordinator (SENDCo). The parameters of the SENDCo role are set out in the SEND Code of Practice (DfE/DH, 2015, p. 118):

6.88 The SENCO has day-to-day responsibility for the operation of SEN policy and co-ordination of specific provision made to support individual pupils with SEN, including those who have EHC plans. 6.89 The SENCO provides professional guidance to colleagues and will work closely with staff, parents and other agencies.

It is though notable that the section does not mention ongoing access to research or other academic study. Such access is important for all SEND concerns, but perhaps most vital for the autism field where research continues to move forward at a great rate and learning and teaching that does not exploit recent findings is likely to be out of date very rapidly. Autism was, therefore, viewed by the project team, as a domain where exploration of the extent to which the RLC model could help teachers access expertise was particularly appropriate. Thus teachers on this project, as will be described, engaged with recent academic research on autism, and as practitioners’ understanding of relevant research increased, they designed and trialled their own interventions for pupils with autism, then reported on the outcomes of the interventions, including any improvements in whole school policy and practice.

Aims

The project was designed to:

- pilot RLCs as a way to translate key evidence about autism and related educational practice held within academic contexts into forms that would be accessible for teachers seeking to include children with autism within mainstream education.
- nurture a culture of knowledge exchange in schools that would broaden access to, and engagement in, research by schools and teachers.

Participants and institutions

Schools were identified purposively for the project. Outreach team members from a London special school responsible for supporting all the teachers in the borough working with pupils with autism were asked to invite schools to participate. These outreach teachers identified schools who had not historically engaged with the outreach team’s support services. All three schools were state primary schools and all served disadvantaged inner-city communities. Lanford and Mosmore were federated two form entry primary schools, with two Heads of School and a single Executive Headteacher leading across both sites. Both schools had over 75% of pupils speaking English as a second language and pupil outcomes inline with national averages. Mosmore was a two-form entry primary school, with over 90% of pupils speaking English as a second language, and outcomes above national averages. Each of the schools had had contact with the outreach service, usually in the form of case-based support rather than formal training programmes.

Each of the three primary schools was asked to nominate a senior leader and a teacher to attend, as shown in Table 1. The RLC model specifically requires this, and this approach is based on recent studies highlighting the importance of school leaders not only facilitating professional learning, but engaging in it alongside teachers (Brown *et al.*, 2017). School leaders enable the class teacher to access resources, such as time out of class or use of whole school professional development time; authority to question and/or change whole school policy and practice. All three senior leaders on the project were experienced practitioners, who had

Table 1. Participants

<i>School</i>	<i>Class teacher</i>	<i>School leader</i>
Lanford	A (Year 6)	V (SENDCo)
Mosmore	S (Year 4)	D (Senior teacher)
Nantsdale	B (Year 1)	C (SENDCo)

been in their current role for over a year. All the class teachers had been teaching for between 3 and 5 years.

The inclusion of a classroom practitioner recognises how influence operates beyond formal leadership roles. Ogawa and Bossert (1995, pp. 225–226), for example, see influence flowing ‘throughout an organization, spanning levels and ... both up and down hierarchies’. Godfrey describes such classroom practitioners as ‘informal evidence champions’ (2017, p. 439). Classroom teachers focused their projects on pupils in their own classes, which covered a range of age phases (see Table 1).

The RLC model, derived from the Professional Learning Communities (PLCs) (Stoll, 2015) and Networked Learning Communities (NLCs) (Earl and Katz, 2006) models, in common with those models seeks new, better ways to help teachers enhance learning through reflective collaborative enquiry and other mutually supportive activity (Stoll, 2015). Purposeful collaborative professional learning improves teachers’ practice and pupil outcomes (e.g. Stoll *et al.*, 2006; Lomas *et al.*, 2011) by creating the conditions for teachers to move outside their own contexts and engage with a broader range of teaching possibilities.

The ‘external expert’, another key element of the RLC model, here a university partner, has been highlighted as crucial to successful teacher research (Maxwell *et al.*, 2015), particularly in terms of avoiding ‘mistake making’ and other approaches that might disempower teachers. To this end, an experienced facilitator of teacher research led sessions with, and acted as a critical friend to the participants, along with a cognitive neuroscientist with expertise in autism and an expert in SEND education. However, unlike previous RLC implementations, this project supported collaboration between university academic staff from different disciplines who might otherwise not work together.

The facilitator led sessions were designed to support teachers in understanding and working through the cycle of enquiry (Brown, 2017). They offered tailored individual support with such tasks as critiquing research questions or data collection tools; and created conditions for critical conversations that would enable mutual learning (Stoll, 2012). The cognitive neuroscientist and the expert in SEND education supported participants by locating up-to-date research evidence that related to teachers’ research themes. Participants were also able to pose questions about individual pupils directly to these specialists, since they attended several of the face-to-face sessions.

In another innovation in the implementation of the RLC model, school participants were also offered ‘practice expertise’: the outreach team members from a special school responsible for supporting all the teachers in the borough working with pupils with autism attended all sessions of the programme and could answer school participants’ questions about practical applications of the research in school contexts.

Project timeline

Table 2 details the content of the face-to-face session’s participants attended:

Impact statements (Session 1)

Many theorists in the field (e.g. Earl and Katz, 2006) argue that effective professional development must be clearly articulated and focused on student learning and active classroom practice. Hence teachers first identified pupils with autism in their classes whose learning required support, focusing on a specific aspect of their learning. They were asked to imagine what successful learning would look like for these pupils by the end of the academic year (June), and to make qualitative statements that described what pupils would be saying, doing and feeling in relation to this focus.

Gathering baseline data (Session 1)

The project defined the *baseline situation* for each pupil as including current learning and teaching in relation to the chosen focus for development. Teachers

Table 2. The RLC cycle

<i>Session/Stage</i>	<i>Activity</i>
Session 1	Impact statements (writing a research question) Engaging with research Gathering baseline data
Session 2	3D modelling (designing the intervention) Effecting whole school change (poster)
Session 3	Planning to gather impact data
Session 4	Sharing your impact data Effecting whole school change (adopter types, framework for change)

were supported to consider different kinds of data they might gather, for example using the Leuven Scale (1994), tracking challenging behaviours using simple bespoke proformas, analysing work samples, designing surveys, or interviewing staff, parents or pupils. Data gathered in relation to teachers' research themes improved understanding of the gap between the current reality and desired teaching and learning practice for the focus pupils.

Engaging with research evidence (Session 1)

The following approach developed by Stoll and Brown (2015) and incorporated as a key feature of the RLC model was used to address the problem of teachers finding research arcane and unapproachable (Judkins *et al.*, 2014). A project literature review drew broadly on research on practice and theory relevant to teaching students with autism. It included, for example, seminal studies involving fMRI brain scans of people with autism, such as White *et al.* (2014). This approach followed Judkins' advice on filtering and appraising studies. Significant chunks of text from the review were printed onto strips of paper, which teachers discussed and classified into themes. Teachers could then read the full literature review and/or the journal articles, pursuing their interest in strips identified as relevant to their pupils. Participants thus engaged fully with quite challenging and lengthy academic material. Significant chunks of text from the review were printed onto strips of paper, which teachers discussed and classified into themes. Teachers could then read the full literature review and/or the journal articles, pursuing their interest in strips identified as relevant to their pupils. Participants thus engaged fully with quite challenging and lengthy academic material.

3D modelling (Session 2)

Participants then used 3D model making, again a common feature of the RLC implementations to date, to build a physical model of the situation they sought to change (see Figure 1). This approach (Brown, 2017) is premised on the notion that created props can aid sensemaking (Stevens, 2013), whilst aiding debate 'on strategic challenges in a generative fashion' (Heracleous and Jacobs, 2008, p. 310). It enables those involved to develop common meaning and purpose through shared language or metaphor (Nonaka and Takeuchi, 1995; Heracleous and Jacobs, 2008). Importantly, this shared language is grounded in the props themselves, so that the props can be shared with colleagues at a later date.



Figure 1. A 3D model of the perception of the situation at the beginning of the project for pupils with autism in Nantsdale School

Note: Those with autism are by themselves at the top right by the question mark; the rest of the class, all well connected, are at the bottom right behind the barrier

Impact data: collection and sharing (Sessions 3 and 4)

In June, teachers colour coded each impact statement: red – not achieved; yellow – partially achieved; green – fully achieved. This provided a rich source of

information about the types of impact that they achieved with their pupils over the course of the year.

Effecting whole school change (Session 4)

A key aim in the RLC model is to share knowledge generated with non-participating staff and benefit whole school practice. The model draws on Greany and Maxwell (2017)'s argument that teacher participation in research can change whole school policy and practice if the project framework embeds the dissemination of findings to a wider school audience. Hence research evidence on the mobilisation of knowledge, for example Knoster (2000) framework for change and the concept of adopter types (Rogers, 2010) was explored with participants. Structured tasks supported participants in sharing their findings: the strips activity and images of the 3D models were shared with all staff; a poster template helped disseminate key messages from the research literature; a PowerPoint template was provided to frame the presentation of evidence on impact. In part, the inclusion of a senior member of staff from each school was designed in part to more easily broker successful engagement with such opportunities for whole school influence.

Research methods

Pre-and post-survey instruments (questionnaires) monitored how effectively the programme helped participants use research evidence to achieve their priorities related to the successful learning and inclusion of children with autism. The university staff's development of their capacity to be involved in knowledge exchange with schools was also evaluated through session 4, the dissemination seminar. Finally, all teacher participants were interviewed both before and after the programme as an additional complementary measure. The focus was on participants' expectations of the project, the impact on them as individuals and the effect on their schools. Table 3 details the timetable for data collection.

Data were analysed thematically (Braun and Clarke, 2006), with equal weighting attributed to each of the data sources. However, the interviews offered the richest and largest source of data, and the findings are therefore weighted towards this data set.

Table 3. Data collection

<i>Data collected</i>	<i>Stage</i>	<i>Participants</i>
Baseline survey	Session 1	All
Impact survey	Session 4	All
Course evaluations	Session 4	All
Interviews	After Session 4	B,C,S,V + two teachers from the outreach team

Findings

Where no specific attribution is given, the data is drawn from interview, baseline survey and course evaluation form responses. Comments from the outreach staff focus on their view of the programme and the possibilities of making use of the RLC model in schools and wider contexts.

Knowledge and self-development: prior training and experience of autism

The interviews showed that participants' knowledge of autism differed. None, as far we are aware, had family or friends with autism. For example:

- School SENDCo V had had significant experience as a teaching assistant (TA) and had spent a seven-week PGCE placement at the local special school. She had attended and facilitated classes run by special school staff on communication systems, sensory training, approaches to mathematics and 'restraint' techniques.
- C&B from Nantsdale School had not read anything 'autism-specific' before the programme started. But both had worked with pupils with autism and sought advice from special school outreach teachers.
- Teacher S saw her knowledge of autism as very limited. When told she was to have a girl with autism in her class, she set herself to study texts that allowed her to 'get into the brain' of people with autism. She did not look at 'research literature' but found inspiration in novels such as *The Curious Incident of the Dog in the Night-time* and biographies of successful people with autism like Temple Grandin. She later enjoyed a special school course on autism that reinforced her conclusions from this reading but did not stop there. She noted that 'Obviously everything I read I had to adapt to the particular child I was working with. I was constantly researching.'

Expectations

None of the participants knew what to expect from the programme. But all shared the excitement of embarking on something new and experimental and quickly committed to the ethos of the project.

Teachers expressed delighted surprise at the extent to which they would be challenged to be creative thinkers. Teacher S of Mosmore School was planning to do a Masters degree in SEND and was immediately sympathetic to the project approach. Teacher B in Nantsdale, who wanted to do a research degree but could not afford it, saw the programme as an ideal blend of daytime professional activity ('something worthwhile for pupils') and a research-orientated course in thinking.

Teachers' engagement with research literature

All participants agreed, in the post-session interviews, that the project had opened their eyes to the range of research literature on autism and its potential to help them find solutions in school. They appreciated the 'strips' activity, used to introduce a wide range of sources and support their induction into the project literature review. They also saw it as a new professional development tool for their work with colleagues: 'a quick way to introduce learners to a large range of researchers and perspectives.'

The success of the 'strips' approach in this project suggests that it could have wide application in teacher professional development activities for SEND.

Participants took particular interest in the literature on socio-economic aspects of difference and autism, 'sensory approaches', bullying and autism, and comparative statistics on autism and exclusion.

Adapting interventions for individuals and their contexts

In Nantsdale School, C&B explored the possibilities of 'sensory timetables' (a highly structured daily set of activities and interactions suggested by an occupational therapist) in work with R and S, a boy and girl with autism. Many staff found R hard to work with: 'There was a nightmare about TA cover for R if his regular TA was away. Everyone could be anxious about stepping in.' Hence the intervention for R had to be tightly structured and immediate, while a slightly less 'tight' model, including timetabled sensory breaks known as 'sensory snacks',

was deemed appropriate for S, who was assessed as less challenging by teachers. Their teachers reported in the follow-up interview:

Both children are now seen as more happy than sad. R is much softer. Things like relationships are developing for him. Having structure, including sensory [activities], in place has really helped him. A big difference ...

In Session 4, the dissemination session, C& B explained how:

consistent use of the sensory timetable has had a positive impact on R's self regulation ... anxiety and distress are less frequent and R has started making more eye contact and is beginning to engage with PECs [communication system] exchanges.

and

S is less prone to dysregulation [sic] and has had very few incidents of high anxiety since the baseline data [was collected]. S is mostly able to label how she is feeling now and is mostly able to say why she is feeling that way.

By the end of the programme Teacher B felt able to make this response to the question 'What do you think you have learned from the evaluation of impact?':

From looking at our evaluation, I would say that sensory timetables for children with high levels of need can enable them to feel calmer, and for those with lower levels, sensory snacks/diet with other strategies definitely make a positive difference.

Observation and thinking time

The participants reported that having space to think about, observe and trial approaches with individual pupils was beneficial in helping them understand what lay behind concerns. For example, Pupil A in Mosmore School was seen as 'lacking social relationships with children in the playground and over-reliant on adults' (see Figure 2).

Careful observation suggested that A was in fact choosing not to have friends and liked being by herself in the playground. She could interact with some success, particularly in a leadership role, but generally chose to keep clear of others. Her teacher

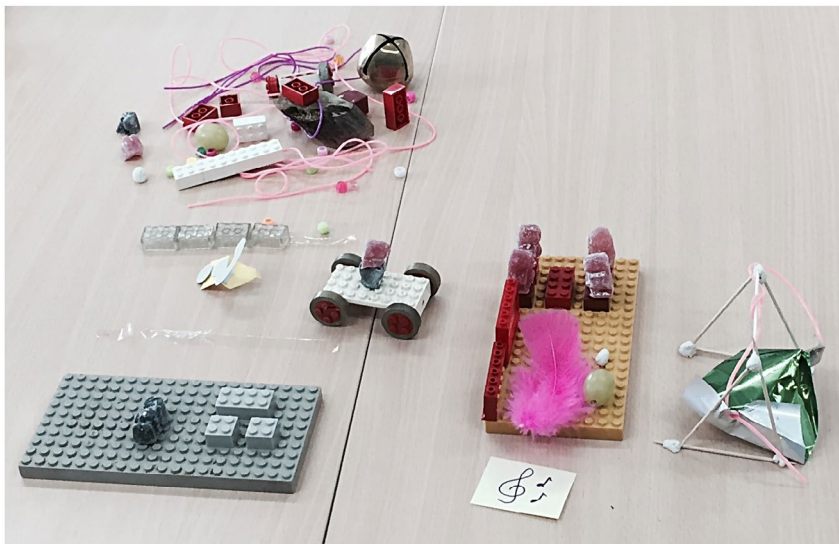


Figure 2. A 3D model of the baseline perception of the situation for Pupil A
Note: Pupil A is a girl with autism in the playground of Mosmore School. A, at top left, is engaged with her own set of activities well apart from other pupils in the playground.

felt that if A’s playground relationships could be enhanced, the effects would spread into the classroom and reduce the stress on her teachers. Hence a programme evolved for break times once a week. The first step involved guided choices: ‘Do you want to play with [this or that] Sylvaniaian toy?’ Then the teacher moved on to act as one of the ‘little creatures’ while A led play with the toys. The next steps brought other children carefully into the game within an imaginary film-making scenario. A was allowed to lead the play as the ‘film director’, revelled in it ‘as long as it was on her terms’ and was felt to have settled into the structured interactions.

All participants across all the schools reported being able to structure interventions more precisely than they had done previously.

Gathering impact data

Participants enjoyed –after some initial nervousness and puzzlement – deciding how they might gather impact data on their interventions: ‘It was good to ask

a question when there was a problem in my class. Next time, I will be able to quickly consider ways to tackle this after implementing changes to see if my theory has worked.’ (Participant V).

This was a significant success of the project’s approach, both in allowing participants to review ‘traditional’ ways of monitoring impact, such as the daily diary, and to evaluate some of their more ambitious development ideas, such as one teacher’s plan to pre-and post-film her target pupil: she was not quite sure what she would do with the recordings. She was initiated into the possibilities of tallying, in her case using counts to gather quantitative data on verbal and non-verbal communication and eye contact. She found this most effective.

Tallying, collating and similar focused methods of data gathering, were seen as an advance on the more typically used daily diaries. Though it was felt that tallying variables such as pupil mood might be ‘soft’ (i.e. not always consistent), participants felt it was a more meaningful activity than keeping a diary. One school adopted tallying and welcomed the ease with which the pupil perspective could be incorporated into this system and TAs given a clear focus for thinking about their work.

All participants work in schools assessed by Ofsted as ‘Outstanding’. It was clear from the interviews how seriously they take their professional development, whether through courses or more informal training. While they were all aware that the Special Educational Needs and Disability Code of Practice (DfE/DH, 2015) encouraged the cycle of ‘assessment, implementation and review’, they found the RLC’s exploration of a range of approaches to impact evaluation new and exciting. This finding suggests that providers might find it useful to include discussions of measuring impact into professional development for those working with minority groups such as SEND.

Empowerment of participants and whole school practice

Participants reported that they felt supported as they worked through the tensions and issues around developing their model of ‘seeking solutions’.

Cross-school dialogue was important. The group discussions allowed the sharing of approaches to common issues. For example, three focus pupils in the trial schools were causing concern because of their ‘acting out’. Their progress on self-management was of interest across the schools and gained respect for participants and the RLC.

Another form of empowerment was less expected, but highly valued. Two teachers felt that other staff had often, before the project, greeted them with suspicion in their role as innovators: ‘Here you are again with your new ideas.’ The project provided highly visible, on-site, evidence of the success of such ‘new ideas’ and enabled participants to refer with confidence to the research as evidence for their actions. Their status in the school improved.

At the same time, the project made participants evidence conscious. Teacher V of Lanford School described her growing confidence in challenging visiting professionals who did not give evidenced proposals for interventions.

It [the project] helped me think about how you would use research to help your practice. We have speech and language therapists and other professionals who come in, say “Look at this. It’s a really helpful tool.” I might now question them, say, ‘OK where’s the research?’ which I definitely would not have done before.

Evidence champions

In Session 4, there was an exercise based on Rogers’ (2010) ‘adopter types’ model which seeks to explain why some adopt new practices more enthusiastically than others, encouraged thought about patterns of informal influence within groups and the possibilities of ‘champions’. All participants referred to this activity positively. Discussion based on this exercise both in and after the session indicated that some schools were considering the possibility of having ‘autism champions’ in the near future, selected by methods similar to those learned through the exercise.

For example, Teacher V, who was worried about consistent support for autistic pupils, had made a plan,

We spoke of an autism champion. ... I am thinking of handing the work over to this teaching assistant [identified in the exercise as a person of high informal influence in the school] who has more time and could do it more consistently.

Growing specific ‘solutions’ into whole school change

Participants welcomed the programme’s focus on whole school change. They felt that the project had provided them with tools to enable this: ‘The advice on mobilizing knowledge and widening the project has been very supportive.’

By the end of the project, teachers C&B in Nantsdale School had already run a successful staff meeting about their work on ‘sensory breaks’. All staff present had agreed that such a system should be introduced across the school. They felt that this reform was likely to make a significant difference to behaviour and outcomes across the school.

Teacher S in Mosmore was cautious about how to take things forward. She was critical of her project work, though the target pupil had clearly made progress in the very limited time available. S mentioned the likely impact on the school at a staff meeting, and planned a training session based on her findings at some point though she might ‘wait for a bit to collect more data.’ She was proposing to move forward quickly with ‘the idea of champions.’

The RLC model seemed to have given participants a framework within which to consider how to effect whole school change beyond the foci of the RLC-defined interventions. ‘Affecting whole school change in the future will be easy.’

Involvement of senior leaders in system development

Teacher C felt that her school senior leadership team was entirely committed to the changes, and that her ability to influence school plans had been significantly enhanced by the clarity and detail with which the RLC had encouraged participants to set out their ideas.

Teachers saw the steps achieved in the project as just a starting point:

I talked to the Associate Head about this. We agreed a certain number of steps before the project was finished. We have probably only got to the second step ... I would like to wait a little bit, talk to senior management, share with other staff, use different visuals and prompts, so we can say ‘We’ve tried this. It works. Please continue using it.’

Time as a practical challenge

Time management, as foreshadowed by much of the professional development literature, was a major challenge. For example, S found that that implementation of the intervention designed for her focus pupil in Mosmore School had to be limited to 20 minutes in Thursday break times.

V in Lanford School saw timetabling and staff shortages as an issue:

I am a full-time class teacher with one afternoon a week for SENCO work. So finding consistent time for my student was really difficult.

Some weeks she could offer her focus student one session, some weeks two sessions and others none. V saw this inconsistency as a particular concern for the learning of a student with autism, for whom unplanned change of any sort can be threatening. 'It's bad not to fulfil his expectations.'

All the teachers, whether SENDCos or not, found class teaching filled their days to an extent that could easily have inhibited involvement with anything risky or challenging. But partners reported that enthusiasm for the project remained strong and however little time was available, all were clear that their pupils had made progress through the interventions they designed and evaluated during the project's span.

Plans for the future

All participants were enthusiastic about the RLC model as a positive step in their professional development. While some found the demands challenging at the beginning, all were happy with their progress by the end.

The interviews pursued the question of whether the approaches adopted in the project should be taken further and if so, what form that development might take. Participants were unanimous in agreeing that the approaches should be expanded further. Among the suggestions:

- Research team members should follow up with the schools involved through whole staff events in which they 'validated' successful project approaches, such as the strip activity, for a wider audience.
- The process should be rolled out across all schools in the local authority, perhaps exploring other areas than autism, such as severe and complex needs in the mainstream classroom
- Further collaborative work between the schools should include the establishment of a forum (online and face-to-face) to share ideas.

Participants also felt the project had given them a blueprint for future school-based research projects: 'I'm feeling motivated and excited to carry out school-based

research. You have equipped us with the necessary tools to make school-based research accessible and manageable.’

Implications for the outreach team

The outreach teachers agreed in principle that the project should expand to involve other schools, particularly those with few resources to support teachers working with pupils with autism. They were acutely conscious of their team’s caseload, which had grown ten-fold from 2008 to 2016 (an example of how hard it can be to sustain an advisory structure based solely on an individual-by-individual caseload). The advisory teachers suggested that it might be time-efficient to engage a large group of schools within a borough-wide RLC, to promote confidence and skills in mobilizing evidence to create successful solutions for those causing concern.

They also felt it might be cost-effective to create an RLC as standard and comprehensive provision for schools preparing to implement an EHCP for a pupil with autism. This could forestall the adoption of less effective and poorly evidenced interventions and avoid the currently necessary management of a heavily rationed advisory offer to schools.

The impact against the hoped-for outcomes

Did the RLC enable key knowledge from academic research about autism and effective practice to be translated effectively to be accessed for inclusion of children with autism?

Evidence from all sources suggests that the RLC enabled effective translation of evidence for schools’ use. Respondents particularly valued access to the evidence on

- up-to-date thinking about autism
- the theory and practice of animating research in schools as exemplified in the RLC model

Participants also felt the project had nurtured a culture of knowledge exchange: ‘I would be very interested in taking part in any other action research provided or carried out by the university’.

Did the teachers involved develop solutions, informed by the evidence, to tackle issues relating to teaching and learning priorities for effective inclusion of children with autism?

The evidence gathered suggests that all involved developed evidence-informed solutions to tackling the issues that concerned them. Teachers went well beyond developing solutions: they implemented them, devised their own schemes to evaluate them with appropriate measures, and were able to report the results to the rest of the project participants.

Programme structure was similarly highly thought of: ‘well paced’ ‘appropriate balance of reading/time spent considering our question’.

The dissemination session became a validation of their work as researchers and model designers in a project that all of them, to some extent, had found risky and challenging at the start. More or less explicitly in every case, it was clear that the programme participants reported that it had fulfilled their hopes of a journey of excitement and discovery about themselves and what they could achieve. Teacher V commented that:

‘I was so excited after the first session ... I went to the associate head teacher and said “This is going to be amazing”.’ She said ‘This is what we want to be doing in every area of the curriculum, not just SEND. For example, the humanities are doing research that they can share with everyone else.’ For me with SEND, I can say to staff, ‘This has been tried, this is backed with research. It’s being able to explain why you are going to use something.’

This optimism was reinforced by their appreciation of the way the lead facilitator mapped possibilities and worked with them on clearly structured plans for their pupils, their schools and themselves: ‘I have felt that I can question and develop ideas that will enable me to start new school-based research.’

All scored programme content as ‘excellent’. When asked for their overall response to taking part in this programme, one participant replied ‘What can I say? I just loved it and found it really useful. It has improved my teaching and my understanding of my chosen child.’

Discussion and conclusion

This RLC is based on the premise that ‘research use is ... a largely social process, with interaction and relationships being key factors in determining how evidence gets used and applied practical settings.’(Cooper, 2010). Based on the reports of the participants, it seems that the use of RLC in a SEND specific context does have some potential in addressing the challenges of designing SEND-focused professional development that enables engagement with research evidence. It may offer possibilities for professional development on wider SEND themes in schools and other institutions and a novel approach in relation to minority pupils whose learning is of great concern, such as those with autism.

While the major rewards for research exploration for teachers can come through the successful animation of ideas that help students, participation in learning, applying and evaluating solutions within an RLC could empower teachers to believe in themselves as researchers and has the potential to show them how powerful effects can be achieved with relatively small inputs of time or other resources to students whose learning causes them concern.

While this has been a small scale project, its methodology and implementation triggered some wide-ranging thought among those involved. The project shows that there is potential for teachers to engage with evidence and research knowledge when properly supported, and that such engagement can have impact on wider school practices in terms of meeting the needs of SEND pupils. It also shows that such research engagement can exert a powerful impact on participating teachers, helping them feel empowered to effect future positive change to the benefit of SEND pupils.

It is to be hoped that an RLC approach to research on autism could work on a wider canvas, such as across a local authority or multi-academy trust, to enhance practice and, while doing it, drive recognition of the possibilities of the active use of evidence across many domains. The RLC model also provides a strong template for future professional development with a SEND focus, one which supports experts to work successfully in interdisciplinary teams and enables classroom practitioners to engage fully with the latest academic research, to create powerful teaching and learning solutions that include all pupils.

Approaches like this, which support teachers to engage with research and work in carefully managed relationships with academic and practice ‘experts’ are particularly important in field like autism research, where the evidence field is fast moving and the identified need in schools growing considerably.

References

- BIESTA, G. (2010) Why ‘what works’ still won’t work: from evidence-based education to value-based education. *Studies in Philosophy and Education*, 29, 5, 491–503.
- BIESTA, G. (2017) *The Rediscovery of Teaching*. London: Taylor & Francis.
- BRAUN, V. and CLARKE, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 2, 77–101.
- BROWN, C. (2013) *Making Evidence Matter: A New Perspective on Evidence-Informed Policy Making in Education*. London: IOE Press.
- BROWN, C. (2015) *Leading the Use of Research and Evidence in Schools*. London: IOE Press.
- BROWN, C. (2017) Research learning communities: how the RLC approach enables teachers to use research to improve their practice and the benefits for students that occur as a result. *Research for All*, 1, 2, 387–405.
- BROWN, C. and POORTMAN, C. (2018) Introduction. In C. Brown and C. Poortman (eds), *Networks for Learning: Effective Collaboration for Teacher, School and System Improvement*, pp. 1–9. London: Routledge.
- BROWN, C., STOLL, L. and GODFREY, D. (2017) Leading for innovation and evidence-informed improvement. In P. Earley and T. Greany (eds), *School Leadership and Education System Reform*, pp. 131–138. Bloomsbury Publishing.
- CAIN, T. (2015) Teachers’ engagement with research texts: beyond instrumental, conceptual or strategic use. *Journal of Education for Teaching*, 41, 5, 217–233.
- CENTRE FOR RESEARCH AND REFORM IN EDUCATION (2019) *Evidence for ESSA Website* [Online at <https://www.evidenceforessa.org/>] Accessed 01/07/19.
- COOPER, A. (2010) Knowledge Brokers: a promising knowledge mobilisation strategy to increase research use in education. Paper presented to the Annual Meeting for American Education Research Association, Denver, Colorado.
- CORDINGLEY, P. (2015) The contribution of research to teachers’ professional learning and development. *Oxford Review of Education*, 41, 2, 234–252.
- DfE/DH (2015) *Special Educational Needs and Disability Code of Practice: 0 to 25 years*. London: HMSO [Online at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf]. Accessed 31/03/19.
- DFE (2016) *Standard for Teachers’ Professional Development*. London: HMSO [Online at <https://www.gov.uk/government/publications/standard-for-teachers-professional-development>] Accessed 20/07/17.
- EARL, L. and KATC, S. (2006) *How Networked Learning Communities Work*. London: Centre for Strategic Education Seminar Series Paper 155.
- EDUCATIONAL ENDOWMENT FUND (n.d) *Teacher Toolkit* [Online at <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/>] Accessed 20/07/20.

- FURLONG, J. (2014) *Research and the Teaching Profession: Building Capacity for a Self-Improving Education System*. Final report of the BERA-RSA Inquiry into the role of research in the teaching profession. London: BERA.
- GODFREY, D. (2017) What is the proposed role of research evidence in England's 'self-improving' school system? *Oxford Review of Education*, 43, 4, 433–446.
- GOLDACRE, B. (2013) *Building Evidence into Education*. Report for the Department for Education. London: DfE. [Online at <https://www.gov.uk/government/news/buildingevidence-into-education>] Accessed 21/11/19.
- GREANY, T. and MAXWELL, B. (2017) Evidence-informed innovation in schools: aligning collaborative research and development with high quality professional learning for teachers. *International Journal of Innovation in Education*, 4, 2–3, 147–170.
- HERACLEOUS, L. and JACOBS, C. (2008) Crafting strategy: the role of embodied metaphors. *Long Range Planning*, 41, 3, 309–325.
- JUDKINS, M., STACEY, O., MCCRONE, T. and INNIS, M. (2014) *Teachers' Use of Research Evidence: A Case Study of United Learning Schools; Final Report*. London: National Foundation for Educational Research.
- KNOSTER, T. P. (2000) A framework for thinking about systems change. In R. A. Villa and J. S. Thousand (eds), *Restructuring for Care and Effective Education: Piecing the Puzzle Together*, pp. 93–128. Baltimore, MD: PH Brooks Publishers.
- LEAVERS, F. (1994) *The Leuven Involvement Scale for Young Children LIS-YC: Manual*. Belgium: Centre for Experiential Education.
- LOMAS, C., HOFMAN, R. H. and OSKER, R. J. (2011) Professional communities and student achievement – a meta analysis. *School Effectiveness and School Improvement*, 22(2), 121–148.
- MAXWELL, B., GREANY, T., ASPINWALL, K., HANDSCOMB, G., SELEZNYOV, S. and SIMKINS, T. (2015) *Approaches to Research & Development for 'Great Pedagogy' and 'Great CPD' in Teaching School Alliances*. Nottingham: National College for Teaching and Leadership.
- MINTZ, J. (2019) A comparative study of the impact of enhanced input on inclusion at pre-service and induction phases on the self-efficacy of beginning teachers to work effectively with children with special educational needs. *British Educational Research Journal*, 45, 2, 254–274.
- MINTZ, J., HICK, P., SOLOMOM, Y., MATZIARI, A., Ó'MURCHU, F., HALL, K., CAHILL, K., CURTIN, C., ANDERS, J. and MARGARITI, D. (2020) The reality of reality shock for inclusion: how does teacher attitude, perceived knowledge and self-efficacy in relation to effective inclusion in the classroom change from the pre-service to novice teacher year? *Teaching and Teacher Education*, 91, 103042.
- MINTZ, J. and WYSE, D. (2015) Inclusive pedagogy and knowledge in special education: addressing the tension. *International Journal of Inclusive Education*, 19, 11, 1161–1171.
- NONAKA, I. and TAKEUCHI, H. (1995) *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- NUTLEY, S., WALTER, I. and DAVIES, H. (2007) *Using Evidence: How Research can Inform Public Services*. Bristol: The Policy Press.
- OGAWAG, R. and BOSSERT, S. (1995) Leadership as an Organizational Quality. *Educational Administration Quarterly*, 31, 2, 224–243.
- ROGERS, E. M. (2010) *Diffusion of Innovations*. London: Simon and Schuster.
- STEVENS, J. (2013) Design as communication in microstrategy: strategic sensemaking and sensegiving mediated through designed artifacts. *AI EDAM*, 27, 2, 133–142.

- STOLL, L. (2012) Stimulating Learning Conversations. *Professional Development Today*, 14, 4, 6–12.
- STOLL, L. (2015) Using evidence, learning and the role of professional learning communities. In C. Brown (ed.), *Leading the Use of Research and Evidence in Schools*, pp. 54–65. London: IOE Press.
- STOLL, L., BOLAM, R., MCMAHON, A., WALLACE, M. and THOMAS, S. (2006) Professional learning communities: a review of the literature. *Journal of Educational Change*, 7, 4, 221–258.
- STOLL, L. and BROWN, C. (2015) Middle leaders as catalysts for evidence-informed change. In C. Brown (ed.), *Leading the Use of Research and Evidence in Schools*, pp. 66–77. London: Institute of Education Press.
- SUPOWITZ, J. (2015) Teacher data use for improving teaching and learning. In C. Brown (ed.), *Leading the Use of Research and Evidence in Schools*, pp. 117–125. London: IOE Press.
- WHITE, S. J., FRITH, U., RELLECKE, J., AL-NOOR, Z. and GILBERT, S. J. (2014) Autistic Adolescents Show Atypical Activation of the Brain’s Mentalizing System Even without a Prior History of Mentalizing Problem. *Neuropsychologia*, 56, 17–25.

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