Building Capacity for Evidence Based Practice

An Overview: 2017/18
1. Introduction

The Kyra Research School is part of a network of twenty-three research schools across the country, all committed to identifying and sharing evidence-based practice with teachers and school leaders.

We exist to support schools across our region, and beyond, to make better use of evidence to inform their teaching and learning. We aim to lead the way in the use of evidence-based practice, connecting and involving teachers and leaders with the latest research, and helping them make better use of evidence in order to implement ‘what has worked’ in their own classroom, to improve outcomes for pupils. In order to achieve this, we provide regular communication, events and training for teachers and leaders about how to improve classroom practice based on the best available evidence, and also support schools to measure the effectiveness of their work.

This year has been both a busy and productive one for the Kyra Research School. We have shared a wealth of resources and key information with schools relating to research-evidence and how to apply it, and we have also provided opportunities for teachers to engage in research first-hand through our Teacher-Led Research programme. As well as this, we have trained our first cohort of Evidence Leads in Education, who will provide ongoing support and advice to colleagues on research and evidence-based practice throughout the county.

Our work at Kyra Research School this year has also seen us reaching out beyond the county of Lincolnshire, working with teaching schools, school improvement services and local authorities in areas such as Rotherham, Derbyshire and Leicestershire. This is very exciting indeed, as it means the capacity which Kyra is creating, to enable schools to engage with research and evidence-based practice, continues to expand. Our hope is that this will lead to improved teaching and learning in as many schools as possible, ultimately making a real and positive impact to the lives of countless children.

James Siddle
Head of Kyra Research School
The Teacher-Led Research Programme

The Kyra Research School Teacher-Led Research Programme (TLR) is a 12-month programme, which was developed to offer teachers and leaders from primary and secondary schools the opportunity to learn about, and to engage in, educational research in a hands-on and practical way. Its purpose is to bring evidence-based research (which can so often be confined to academic circles) directly into schools, and into the classroom, in a way which results in real impact on school improvement, development and evaluation.

The programme introduces its participants to the basics of research, and guides them through the process of designing, implementing and evaluating their own research/innovation project, or micro-trial. The chosen project must be designed to meet, or contribute towards, a key priority in the improvement plan of their own school.

The TLR is a year-long programme, made up of six training sessions (which make up the equivalent of 4 full days of training) and including ongoing mentoring and support between training sessions and optional online twilight discussions. Juliet Brookes, Research and Development Lead, explains “The TLR sessions are very much framed around the three stages of the Education Endowment Foundation’s DIY evaluation guide; preparing for, implementing, and analysing/reporting on a research or innovation project. However, the sessions also include plenty of customised content based on our participants’ particular research interests, and on their training needs survey results.” The TLR programme has many aspects, which include practical workshops, reading tasks, group discussions, learning about the latest theory and research, and sharing information on in-school teacher-led research activities and project progress.

As a result of the TLR, participants develop and refine their own ‘theory of change’ to impact on pupil progress, and eventually share their finding in the form of a research poster which is presented at a showcase celebration. Following its very successful first year, the Kyra Research School TLR Programme began again in July, offering yet more teachers and leaders the opportunity to learn about the transformational role that evidence-based research and innovation can have in schools. The programme has also expanded geographically, with the TLR now also taking place in Chesterfield and in Rotherham.
Louis Frith

“I originally found out about the Kyra Research School TLR programme when I was approached by a member of the senior leadership team at my school, who suggested taking part in the programme for the purposes of personal CPD, and also with a view to ultimately sharing what I learned about evidence-based research with colleagues throughout the school.

The programme was made up of six sessions, where we learned about the significance and impact of evidence-based research in schools, and how to plan, design, implement, and evaluate a research project for ourselves. We were guided through complex and previously unfamiliar topics such as research methods, feasibility, preparing a research proposal, and delivering, monitoring and documenting the implementation of a research project. Finally, we were taught how to analyse data in order to evaluate the significance of the statistical outcomes of our project. There is so much information out there regarding research, and it has the potential to be overwhelming, but the TLR sessions succeeded in distilling a huge amount of information for us in a manageable and very effective way. I also learned a great deal by going through the process of implementing a research project for myself, and I learned as much from what didn’t quite go to plan as what did!”

To what extent does recorded verbal feedback positively affect student progress?

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1. Purpose of the research
The value of informal, relevant and timely feedback is regularly discussed. Much research, such as in the Black box (Black et al., 2004), has shown that feedback improves motivation and performance. However, clear feedback can be challenging and a concern for teachers with so much information. Within the Priory Academy LSST, there is currently an ongoing concern with school feedback, because feedback is subjective and students are sensitive to this feedback. The current study aimed to investigate the impact of feedback on student learning, and the potential for self-assessment to improve feedback.

2. Research Design
A between-participants design with two levels to the independent variable was used with a pre- and post-test design. The first post-test was conducted immediately after the intervention, and the second post-test was conducted later to assess long-term impact on student outcomes. Two conditions were created:

- Control: Condition Prevention of written feedback
- Intervention: Condition Verbal feedback

3. Methods
Participants, Sample Size and Randomisation
Two groups of five were selected to take part in the study. The first group consisted of 10 students in Year 10 and 12 students. All students were aged between 17 and 18 years. The second group consisted of 10 students in Year 11 and 12 students. All students were aged between 16 and 18 years. The participants were assigned to either the control group (10 students) or the experimental group (10 students).

4. Results
The results were calculated using a t-test for the pre- and post-test. The results showed a significant difference between the two groups, indicating that the experimental group (verbal feedback) outperformed the control group (written feedback).

5. Conclusion and Recommendations for future research
In conclusion, verbal feedback is an effective way of enhancing student learning. Verbal feedback is a more effective form of feedback because it provides students with specific and timely information. It is recommended that future research should explore the long-term impact of verbal feedback on student learning and the potential for teachers to develop effective feedback strategies.
Julia Greenfield

“I undertook the TLR programme last year, and as part of that I ran a micro-trial with John Noden, who is the year 3 and 4 phase leader at Lacey Garden Junior School.

With the government’s multiplication table check being rolled out nationally in 2019, we decided that a research trial on the effectiveness of different methods of teaching multiplication tables would be very useful for teachers and pupils alike. We decided to test the effectiveness of three methods; interleaved retrieval practice, interleaving, and the control involved chanting of multiplication tables in a block of time.

We undertook the micro-trial in January 2018. Using the network we had built up through the Kyra Research School we conducted research in 15 schools, across 21 classes of Year 4 pupils, totalling around 450 children. We made sure we had a good mix of different types of schools with varying pupil demographics. Our focus was on the level of pupil retention of their times tables in response to each of the three different methods of teaching. We particularly focused on the 6 and 12 times tables.

“There is so much information out there regarding research, and it has the potential to be overwhelming, but the TLR sessions succeeded in distilling a huge amount information for us in a manageable and very effective way.”

My project was based on feedback to pupils; specifically, whether written or verbally recorded feedback was more effective in improving pupils’ progress. I collected data from 120 pupils, all of whom completed a timed essay. Half received written feedback, and the other half, recorded feedback. The content and detail included in both the written and recorded feedback had to be as similar as possible to make the research valid. Following feedback, all pupils re-drafted their essay, and at a later date answered a different, but similar, essay question in timed conditions. The outcome of my research project was that both forms of feedback had a similar effect. While in some ways this was disappointing, I learned a huge amount through the process and the TLR programme set me up well to complete further research projects more proficiently in the future, as well as putting me in a position to be able to support my colleagues with their own research projects. I know that next time I would do some things differently, for example, increasing the size of the study so that there would be more data to analyse.

I presented the results of the project on a research poster, and I explained the process and outcomes of the project to others on the TLR programme, and to my headteacher. Taking part in the programme has not only given me a much greater understanding of the importance of evidence-based research and a much clearer understanding of the research process itself, but it has also helped to raise the profile of evidence-based research within my school. I think raising this awareness is extremely important in supporting continual improvement across the education sector, making sure that the best educational theory, what is shown to really work, is actually put into practice effectively in classrooms across the country.”
The data we collected showed some promising initial findings that children who were taught their times tables through interleaving demonstrated the greatest level of retention.

Following the trial, pupils were tested on the multiplication tables at the end of the week, on the following Monday, two weeks later, and thirty days later. The data we collected showed some promising initial findings that children who were taught their times tables through interleaved retrieval practice demonstrated the greatest level of retention. Interleaved retrieval practice meant completing times table retrieval exercises for 1 minute at four different times during the day (rather than in one 4-minute block).

However, the findings weren't quite at the statistical threshold which proves reliability and statistical significance. Therefore, from this promising premise, we are looking to replicate the trial with more children and over a longer period of time, this time with only two variables (interleaved retrieval practice and interleaving) to see if we can reach a statistically significant outcome this time around.
Anna Miller

I designed a micro-trial on the topic of marking and feedback, and how different methods of feedback might affect pupils' learning and progress. The trial took place in 3 primary schools, 1 secondary school, and 5 special schools, in 14 classes altogether across the schools. The research was based on a literacy sequence lasting one week; with one literacy sequence being designed for year 5 and another for year 9. I had support from SLE's and lead teachers to make sure that those teaching sequences were really high quality. They also had to be very detailed and precise, so that all teachers were teaching exactly the same content, on the same day, for the same amount of time. There could be no deviation in the approach to teaching, to ensure that only the effect of the feedback was being tested. All of the teachers involved in the trial were given an afternoon of training to guarantee consistency in the teaching of the sequence across the classes and schools involved.

Three different types of feedback were tested in the trial, these were live (verbal) feedback, whole class feedback, and written marking. Live feedback consisted of the teacher or TA moving around the classroom and offering individuals one-to-one verbal feedback on their work. Whole class feedback consisted of taking in books, reading all of the pupils' work, and making a proforma summarising positives/negatives in pupils' work overall, and making a note of any pupils who hadn't understood or needed extra support. In the first 10-15 minutes of the next lesson, whole class feedback was delivered based on the information gathered on the proforma, with TA support of children who needed extra help. Written feedback outlined positives in the work of each pupil, and next steps for...
improvement, including corrections and/or questions. Again, 10-15 minutes at the start of the next lesson was set aside for pupils to respond to written feedback.

To track the effect of the different types of feedback, pupils were given a cold writing task prior to the trial week, where pupils completed 45 minutes of imaginative writing in response to a stimulus. After the trial week, the pupils again completed a 45-minute imaginative writing task, in response to a different stimulus. A team of teachers, with expertise in marking writing, were given training on how to mark the written tasks against clear and specific criteria. Marking was also moderated in pairs and by the Project Leads to ensure accuracy and consistency.

“I presented my trial and findings on a research poster, which I then shared with others on the TLR, headteachers, and at the Kyra Research School conference. All of us on the TLR learned a lot from one another’s research projects and trials and were able to ask one another questions and share what each of us had taken away from the process.” Our data showed that overall whole class feedback was the most beneficial, followed by written feedback, and that live feedback was the least beneficial. The findings were interesting and promising, and whole class feedback seemed to offer a significant advantage based on the data collected within the trial. However, unfortunately the data did not meet the threshold of statistical significance which would prove its reliability. If I were to replicate this trial, I would include only two variables to make the likelihood of the data being statistically significant stronger, and would also aim to increase the pupil sample size. I presented my trial and findings via a research poster, which I then shared with colleagues on the TLR, headteachers, and delegates at the Kyra Research School conference. I learned so much from taking part in the TLR which has further developed me in my role as Research Champion for the Mobilise project. The TLR Celebration Event was a great opportunity for everyone who had completed to programme to share and celebrate their research posters and projects and to continue learning about quantitative and qualitative research.

All of the TLR Research posters are available online to be viewed here: https://kyra.researchschool.org.uk/?p=679&preview=true
Teacher Led Research Programme
3. Funding for Small Scale Research Projects

For schools interested in running their own research trial, the Kyra Research School are offering the opportunity to apply to take part in a Mobilise Grant-Funded Trial, designed for small-scale research projects. The ambition of the Mobilise Grant Funded Trials is to encourage schools to engage in their own research to support evidence-based practice in the classroom. The grants aim to support the writing of quality bids for research projects, to create capacity to undertake these projects in schools, and to help to develop and embed an evidence-informed approach within the education system. Any Lincolnshire school, or group of schools, can apply. The school must show that it has a promising project based on a piece of evidence, or on their own innovative idea. The school must also have done their own initial pilot of the idea that shows some promise to support their application; this must include data with a comparison between an intervention group and a control group. Once the trial is complete, results must be presented on a research poster, shared by the school, and disseminated across the wider county.

The grants aim to support the writing of quality bids for research projects, to create capacity to undertake these projects in schools, and to help to develop and embed an evidence-informed approach within the education system.

It is anticipated that there will be up to three opportunities to submit bids for funding to support research projects, but the funding will be allocated to successful bids on a first-come-first-served basis; as such it cannot be guaranteed that a third bidding round will take place. As part of the Mobilise Grant-Funded Trials, the Kyra Research School are also offering one-day CPD workshops to prospective applicants, to support the writing of a quality bid. Those who are successful will also benefit from mentoring and support throughout the implementation of their project.

The first workshop and the first application window for the Mobilise Grant-Funded Trials have now ended, but there are two more opportunities to take part in the CPD workshop and to apply for a grant:

**Workshop dates:**
- Workshop 2: 13.11.18
- Workshop 3: 08.03.19

**Application windows for bids:**
- Round 2: 5.11.18 – 7.12.18
- Round 3: 25.2.19 – 22.3.19

For more information, contact: research@kyrateachingschool.com
This year the Kyra Research School designated, inducted and deployed its first cohort of Evidence Leads in Education (ELEs). The main purpose of the ELEs is to support school leaders throughout Lincolnshire, and beyond, in using evidence-based practice in their own context to enable school improvement. All of our ELEs are outstanding teachers, who are also middle and senior leaders, with the skills to support individuals and teams in similar positions in other schools. ELEs are experts in using research and evidence to inform practice in the classroom, and combine their knowledge, interpersonal skills, and coaching skills to help to make evidence-based practice a reality in as many schools as possible.

Applications to become an ELE were invited over a three-week period in February 2018, (applications also had to be endorsed by the applicants headteacher or a senior leader). Applications were narrowed down to a short-list and invited for interview, with successful candidates demonstrating attributes which lent themselves to excellent communication, training and innovation, qualities which are all vital to fulfil the role. The new ELEs attended a training day in April to prepare them for their role, and will also continue to attend annual training days each year, to keep on top of the latest education theories and research.

ELEs have been deployed to support and contribute to the work of the Research School, focusing on encouraging the use of evidence to inform school improvement decisions. ELEs have been deployed in a variety of different ways so far to maximise their impact, for example, to co-design and co-deliver CPD including the TLR in Lincolnshire and Chesterfield, and to act as a coaches and mentors for practitioners who are engaged in evidence-informed interventions. Other deployments have included activities such as speaking at after-school staff meetings, leading workshops to look at the evidence on a particular area of the curriculum, facilitating a professional learning community, undertaking activities relating to evaluating interventions or projects, and co-designing micro-trials.

“The introduction of the first cohort of ELEs has really helped to build capacity within the system to further the influence and impact of research and evidence-based practice in schools across Lincolnshire and beyond”, says Juliet Brookes. “We are intending to recruit more ELEs later this term, and the hope is that we are developing a sustainable model which will continue to engage more schools in evidence-based practice, and help them to become increasingly proficient in their own right in this area.”

There are now plans to work with other local authorities and school improvement services within the East Midlands to develop further ELE hubs across the region. Kyra’s ELE model is also being replicated beyond the East Midlands, at Doncaster Research School (under the name of ‘Specialist Leaders’) and also at the Aspirer Research School in Cheshire. “It is fantastic to see other Research Schools taking up our ELE model”, says Juliet, “as it means that the impact of evidence-based practice can spread even further, and that ELEs can help teachers and leaders to use it to enable school improvement on an even wider scale.”
Laura McQuade – An ELE

“I have been a secondary school teacher for 17 years, and wanted to further develop myself by engaging with research surrounding best practice in teaching and learning. This led to me completing a part-time PhD in Research in Education, as well as completing my own research project with the Lincolnshire Teaching Schools Alliance on self-regulatory strategy development in relation to writing. This meant guiding and enabling pupils to design their own marking schemes to support them in developing their writing skills, and I presented my research findings at a Kyra Research School workshop. When the role of ELE was advertised by Kyra, I felt that it would fit perfectly with my interests and experience and so I applied. I got through to interview and was accepted, along with six others. We had a day of induction and training, which included particular emphasis on how to support and coach others in the area of research and evidence-based practice.

After training, we were each allocated our first task as an ELE, which was designed to be in line with our own particular experience and skills. I was deployed to co-deliver the TLR in Chesterfield alongside Juliet Brookes. In this role I am helping teachers to learn all about research and evidence-based practice, and will be helping them to design, complete and evaluate their own research projects.

Being an ELE has also allowed me to make a real difference within my own school setting. Teachers at my school are given the option to engage in a research project to fulfil their annual CPD, and I support each teacher who takes this opportunity up with training and mentoring. The school is becoming much more research orientated as a result. Research posters completed by the teachers who have taken part are disseminated to staff throughout the school, as well as being displayed in the staffroom. Research and evidence-based practice make a tangible difference in the classroom, and I think it has also meant that our pupils feel even more valued, because they know their teachers are actively engaging in research to improve teaching and learning. Overall, engaging in research projects keeps us very pro-active as a staff and makes the school a very exciting place to be.”
Kyra Research School has been working very closely with the Rotherham School Improvement Service (RoSIS) over the past year to support school development through research in the borough. In the Autumn Term 2017 Kyra partnered with RoSIS to organise and host a conference focused on strategies to ‘close the gap’ and raise the bar of achievement for disadvantaged pupils in the area. James Siddle and Juliet Brookes organised prestigious speakers to join in the conference and share their advice and wisdom. This included Steven Higgins of the EEF, the key figure behind the development of the famous ‘Teachers and Learning Toolkit’, and also Alex Quigley of the EEF, author of the book ‘Closing the Vocabulary Gap’. Kyra also ran workshops on the day and put together an ‘expert panel’ who discussed key strategies for closing the gap, and answered pertinent questions posed by attendees.

Kyra have also facilitated a number of workshops for a group of head teachers working across the Rotherham borough, led by James Siddle and Juliet Brookes. The workshops were put in place to train and support heads interested in undertaking research in their own schools as part of a borough wide research project with a focus on ‘closing the gap’ for disadvantaged pupils in the area of writing. The project is now underway across 35 schools in the Rotherham area, with 30 primary schools, 3 secondary schools and 2 special schools all taking part. It is testing the impact of self-regulatory learning on the rate of pupils’ progress in writing. Kyra Research School have been instrumental in setting the project up, which will run over a period of two years, and will also be providing ongoing support for the head teachers involved.

Kyra’s work with RoSIS is set to continue, with a cohort for the Teacher-Led Research Programme. Kyra is also supporting RoSIS to deliver a programme focused on the development of Teaching Assistants, similar in approach to the Mobilise project, which has proved to be a great success across Lincolnshire.

Del Rew, Head of Education at RoSIS, explains “the Kyra Research School has been instrumental in helping us to provide the necessary information and training needed to support our schools in conducting research, in order to improve outcomes across the Rotherham borough. Our relationship with the Kyra Research School has proved to be very fruitful so far, and we look forward to continuing our work with them in the year ahead.”
Take a look at our videos from the initial launch of our Research School, featuring Professor Steve Higgins, James Siddle, Marie-Claire Bretherton and others:

Professor Steve Higgins: https://www.youtube.com/watch?v=k08O5b0EAQg

James Siddle: https://www.youtube.com/watch?v=w5854UMtQe8

Marie-Claire Bretherton: https://www.youtube.com/watch?v=S0IRQf60N3g
