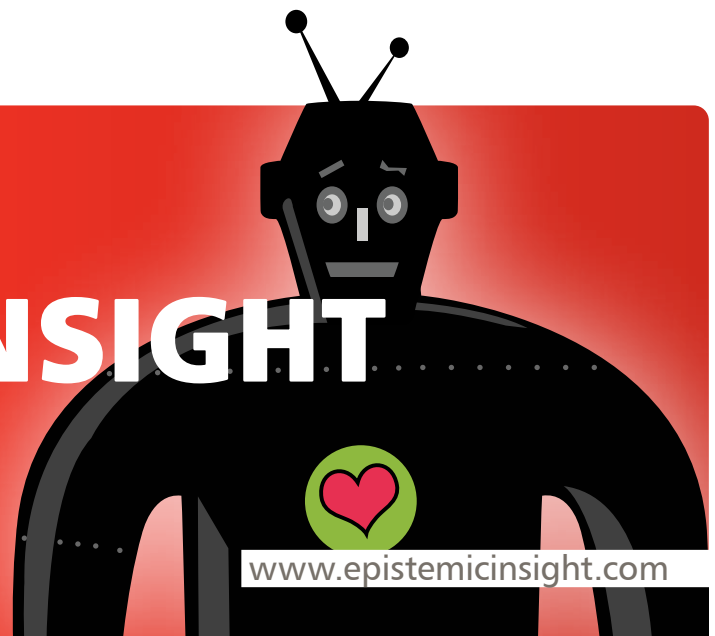


THE EPISTEMIC INSIGHT EXPLORER

SEPTEMBER 2021



WORKING IN PARTNERSHIP WITH PRIMARY SCHOOLS IN CHALLENGING TIMES!

THE STORY OF A RESEARCHER

I am a Research Fellow in the LASAR team and as lead for the Essential Experiences in Science project I have been collaborating with teachers as action-researchers in their classroom.

PROJECT: ESSENTIAL EXPERIENCES IN SCIENCE AND INVESTIGATING BIG QUESTIONS

I'm Sherry Simpson and in my project, we are working with a range of schools across the country to support their students aged 8-12 years to engage with 'hands-on' science learning.

Through a series of free pre-designed workshops, each activity contextualises a real-world problem or scenario, offering students opportunity to develop enquiry skills and scholarly thinking by investigating the nature of science and other ways of knowing.

Teachers upskill their enquiry-pedagogy to support their students through fun and engaging resources that explore the strengths and limitations of science when responding to Big Questions. We started by working with schools in East Kent, where I would go into schools with colleagues to deliver CPD to teachers and team teach student workshops in the classroom. The workshops explained that in science we make observations of the natural world and test ways to explain these observations.

WHAT IS EPISTEMIC INSIGHT?

The Epistemic Insight Initiative helps students of all ages to ask and explore Big Questions.

These are questions that bridge science, religion and the wider humanities such as:

- Can a robot be a good friend?
- Is it true that you are what you eat?
- Why does the universe exist?

The Initiative is led by the LASAR Research Centre at Canterbury Christ Church.

The University's research strategy includes creating a student population who are active researchers in the fields where they aspire to work.

It's an ambition that fits very well with our own vision to develop 'co-created' research projects that are conducted with and by our tutors, teachers and students.



The first activity is a simple 'paper drop' exercise to notice the effects of air resistance. The teacher highlights and uses the words observe and recording observations as key to the method of science.

This is followed by an investigation into 'Why did the Titanic sink?'. It's a question that bridges science and history, and students experience investigating this 'bridging question' through the lenses of two individual disciplines.

While they are 'being a scientist' students work with a model titanic and come up with a hypothesis about what happened and then test out their ideas, recording observations as they go. It's a fun opportunity to work scientifically, with extra towels often needed to wipe up the water! Next students become 'a historian'.



They use historical sources and role-play, and become a character from the titanic, examining the people story behind the disaster to try to establish who was to blame. This generated many a passionate debate!

The workshop signposted key methods of science and history – the disciplinary knowledge interacting with substantive knowledge.

It is interesting to note that the recent Ofsted subject reviews have identified the interplay of these two forms of knowledge as vital for high-quality teaching and learning, noting "Acquiring disciplinary knowledge is an important goal of the national curriculum." (Ofsted, 2021, p. 8).

Data has been gathered through pre and post questionnaires of students and teachers to assess development of Epistemic Insight.



FLEXIBLY FACING THE CHALLENGES!

It was going well; we had undertaken Epistemic Insight workshops in six schools and had a further eight interventions booked. Then came March 2020 and everything changed! The project focus transferred from engaging in person to working remotely. Consequently, maintaining or creating relationships with schools and other agencies was initially more problematic.

However, the benefits of this new way of working enabled further reach for Epistemic Insight, delivering interventions across the country, now not limited by physical locality.

As a team we have become innovative and flexible, offering a covid-recovery solution. Consequently, research conversations moved online, and a range of new, vibrant and informative resources were developed in collaboration with experts. The change in working enabled online live and asynchronous professional development sessions for teachers, providing a flexible, bespoke offer to fit around teaching commitments. The research in the classroom was rightfully transferred to the teacher-researcher.

Hence, my role as researcher adapted toward building and improving those professional relationships and remote support for the teacher-researcher, replacing my physical delivery of workshops. Data collection aimed to test the impact of the CPD and class workshops mainly through surveys from participating students, teachers or parents.

It has been brilliant to receive examples of student worksheets and photos to evidence this. Because of my remoteness from the research setting, feedback from teachers has gained significance and is sought after. Through qualitative interviews, I have had opportunity to discuss the impact of the activities and resources upon teachers' pedagogy and their student learning experiences.



I have noted some examples of teacher Feedback...

What are the key points you have learned from the investigations?

The investigative aspect of each lesson engaged the students...

The lessons were exciting to teach!

Science is about observing the natural world around us...

Discussing with children how the lesson could fit into other subjects and why.

What if anything will you change in your teaching as a result of what you have learnt?

I will use more big questions in my teaching...

I will spend more time doing and observing – less time writing...

Links to real world connections and other areas of curriculum...

BEING OPTIMISTIC FOR THE FUTURE!

The benefits and resilience of EES/IBQ workshop activities and the engaging enquiry resources in the face of the pandemic have been obvious.

We are either directly working with or in discussion to deliver intervention activities to over twenty schools.

These workshops offer catch-up activities for students, proactively designed and ready for teachers to deliver. Provided free to participating teachers and trainee teachers.

This exciting project will run in the Autumn term. It aims to energise and support teachers and children through practical 'hands on' science enquiry activities, with opportunity to build enthusiasm for science and Big questions.

The research outcomes will help refine the resources we use to further support schools and will lead to publications for teachers and other stakeholders.



Here is an example of one of the card activities – Why do Spinner's spin?

The discussion: Science specialises in asking and addressing small, precise questions about the natural world.



SHERRY SIMPSON
LASAR Research Fellow
and Coordinator

How did I become an educational researcher? My background is in FE, a qualified teacher, assessor and Centre lead for Accounting, with Business/ Management program delivery. More recently, I achieved an MA in Careers Management.

My dissertation focused on the transition of Year 12 female students into STEM linked HE study, prompting my interest in educational research. In 2019, I replied to an advert to join the LASAR research team. It was not long before I took on the research role of Strand lead for primary schools, delivering CPD to teachers and Epistemic Insight workshops for Key stage 2 pupils.

Since the pandemic began and things moved online, I have led the *Essential Experiences in Science* project, and worked alongside colleagues as a researcher on *Investigating Big Questions*. Both projects focus on Year 4-8 pupils, supporting teacher researchers with their enquiry pedagogy in the classroom. In 2020, to develop my research and academic skills further, I began an Education Doctorate at CCCU. I really enjoy the life of an educational researcher and work with a very supportive team of colleagues. I hope you find my research story interesting...



Q AND A

- What makes research in education interesting?
- What are the benefits of educational research for teachers?
- What makes a good researcher?
- Why 'Big Questions'?
- How important is practical science enquiry in the classroom?



JOIN OUR RESEARCH!

If you are interested to find out how you can get involved, we would love to hear from you. This could be through your placement or through a research module, or you may know a school or colleague who would be interested to take part.

Please contact Sherry Simpson at: lasar@canterbury.ac.uk
In the meantime, take a look at our website and some of our resources:

www.epistemicinsight.com/ees

