



Fostering independent research skills and critical enquiry among school students: A case study of a school–university partnership to support the Extended Project Qualification

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Abstract

This co-authored case study tells the story of a partnership project that aims to support students aged 16–18 to develop independent research skills. The University of Bristol, in collaboration with St Mary Redcliffe and Temple School, have developed the Extended Project Qualification Support Programme. During the support programme, students are offered supported visits to the university's libraries, and mentoring from university researchers to aid them in completing the Extended Project Qualification (EPQ). Between 2013 and 2016, the programme supported over 650 students in 23 schools in the Bristol area. Outcomes of the EPQ Support Programme include that students reported gaining skills in research, independent learning and critical enquiry, as well as familiarity with the university environment. The case study also explores longer-term impacts in preparing students for university and changing their attitudes to research, including the perspective from university researchers. Finally, the paper reflects on the partnership work involved throughout the project.

Keywords: Extended Project Qualification; critical enquiry; independent learning; research skills; partnership

Key messages

- UK universities are in a position to support students completing the Extended Project Qualification. This case study provides an evidence-based framework to consider adopting, making the most of the resources and expertise that exist within these institutions.
- Initial findings suggest that by supporting the Extended Project Qualification, universities may play a role in fostering independent research skills and critical enquiry among some secondary school students, preparing them for university and beyond.
- Effective partnership between schools and universities is key in developing activities that are mutually beneficial and sustainable.

Introduction

This paper presents a case study of a programme to support students completing the Extended Project Qualification (EPQ). The programme came out of a collaboration between the University of Bristol's Public Engagement team and St Mary Redcliffe and Temple School, a comprehensive Church of England voluntary aided secondary school. The evidence presented in this case study was collected primarily for evaluation purposes: to develop and refine the EPQ Support Programme, and to assess its impact on secondary school students and researchers from the University of Bristol.

What is the Extended Project Qualification?

Introducing an extended project to the curriculum was recommended in the Tomlinson Report for the reform of 14–19 education in the UK (Tomlinson, 2004: 32). It sought to offer opportunities for young people to improve skills in research, problem solving, critical thinking and independent learning. It also aimed to encourage a flexible project chosen by the students themselves, with 'learning tailored to particular interests' (ibid.: 11).

The Extended Project Qualification (EPQ) now exists as an optional qualification that students aged 16–18 complete alongside their A Levels or equivalent qualifications. It is a Level 3 qualification, broadly equivalent to half an A Level, and requires 120 guided learning hours. The EPQ is unique in that it is a self-directed piece of work that involves a process of planning, research and evaluation leading to a 5,000-word dissertation, investigation, artefact or performance. Students are free to choose the topic of their EPQ, and it does not need to enhance or complement their contemporary studies. Students also submit a reflective log of their EPQ, and 20 per cent of the marks are allocated to the Assessment Objective 'Review' (this varies by exam board). This encourages students to evaluate their work and reflect on the skills gained throughout the qualification. There is also an opportunity for students to develop communication skills through a presentation of the outcomes of their project.

In the 2005 White Paper, *14–19 Education and Skills* (DfES, 2005: 63), a pilot of extended projects was announced 'to stretch all young people and test a wider range of higher-level skills.' The 2007/8 pilot provided evidence that extended projects could offer students more choice and challenge in their learning, allowing them to develop new skills and possibly prepare them more effectively for higher education (Centre for Education and Industry, 2008: 8). Wider roll-out of the EPQ began in the academic year 2008/9. Take up of the EPQ has increased year on year, with 38,049 EPQ entries in the academic year 2014/15 (Gill, 2016: 2).

The EPQ Support Programme

Background to the EPQ Support Programme

In 2013, Research Councils UK launched the School–University Partnership Initiative (SUPPI), which aimed 'to create structured and strategic mechanisms for HEIs [Higher Education Institutions] to work in partnership with secondary schools and FE colleges' and to 'support researchers' direct engagement with students and bring contemporary and inspirational research contexts into formal and informal learning to enhance and enrich the curriculum' (Research Councils UK, 2013: 27). The University of Bristol is one of 12 universities supported by this initiative to engage with local schools more effectively. Partnerships with local secondary schools were nurtured by the Schools

Partnership Coordinator within the Public Engagement team to build a programme of research-based activities for students that met SUPI aims. Throughout the initiative, the Bristol SUPI team, in partnership with schools, took an iterative approach to developing its activities year on year, informed by a continuous evaluation process. The evaluation approach emphasized gathering formative evidence to learn from and improve activities after each delivery cycle. This paper is an additional output of the EPQ Support Programme's evaluation, further to final SUPI reporting submitted to Research Councils UK. Key learning points from all 12 SUPIs have been collated by the National Co-ordinating Centre for Public Engagement, who provided support throughout the development of the initiatives (NCCPE, 2017).

One SUPI partner school was a local 11–18 comprehensive secondary school, St Mary Redcliffe and Temple School. The school were keen to engage their sixth-form students (age 16–18) with the university, both to support students' studies and to raise aspirations. The EPQ Support Programme was developed in collaboration with the school. Due to the nature of the qualification, and its focus on independent learning and research, the school had identified the need for greater resources and support with the research process.

From the perspective of the University of Bristol, supporting EPQs also met the aims of the Bristol-hosted SUPI to raise aspirations among school students towards higher education, and to raise awareness of the research that takes place at the university. Equally, with the increased uptake of EPQ, it was predicted that support could be scaled up to a sustainable programme to benefit more schools, including those supported by widening participation initiatives. It also presented an opportunity for researchers to gain public engagement experience. It was clear that providing support for EPQs delivered mutual benefit for the university and the partner school. Strategic fit of the programme within both institutions contributed to the success of its co-development (Handscomb *et al.*, 2014: 20).

Due to the natural fit with SUPI aims, four other SUPI-hosting universities developed a structure for EPQ support through the initiative: the University of East Anglia, Lancaster University, the University of Manchester and the Open University. Each took a different approach to supporting EPQs, but the support of the NCCPE enabled shared learning, resources and best practice.

Structure of the EPQ Support Programme

Between 2013 and 2016, the EPQ Support Programme supported approximately 650 students from 23 schools. The current format of the programme, following four years of development, is set out below. It was co-developed by the Public Engagement team and St Mary Redcliffe and Temple School, in collaboration with Library Services and the Student Recruitment and Widening Participation team. It comprises three key stages: library visits, the EPQ Mentoring Fair and follow-up activities.

Library visits

In the summer term, the university's nine libraries are opened for three visit days designed specifically for EPQ students. The timing suits many schools, as it corresponds with the initial stage of the EPQ, when students are beginning their research, and gathering sources and ideas. The library visits begin with a session from a specialist subject librarian, covering research skills and using and evaluating sources. During the visit, students can access online journals and printed materials, supported by undergraduate

student ambassadors. Students are then encouraged to make individual visits to the libraries during the summer holidays to supplement their research.

EPQ Mentoring Fair

Following the library visits, the EPQ Mentoring Fair is an opportunity for EPQ students to work directly with researchers at the university and receive guidance on their project. The fair takes place in November, when most students are in the research and development phase of their projects. Each researcher (mentor) is assigned a small group of up to five students based on the mentor's area of research and students' EPQ titles. Mentors give advice that is both subject-specific and skills-based in terms of the research and writing process. The mentor leads an hour-long discussion with the students about their individual projects, with students also supporting each other in the group.

Mentors can be at any research career stage, and are recruited from across the university's six faculties to support students in a range of subjects. Before the fair, all mentors attend a training session led by Richard Wheeler (Assistant Head Teacher and Head of Sixth Form, St Mary Redcliffe and Temple School) and the Schools Partnership Coordinator from the Public Engagement team. The session covers information about the qualification, and highlights areas where students could benefit from support. It is also an opportunity to review previous students' final work, and their production and assessment logs, so mentors are familiar with the process, output and assessment.

Follow-up activities

Following the Mentoring Fair, students and mentors are encouraged to stay in touch via email for ongoing support (usually through their teachers). Some mentors send resources to students, and students can ask questions or request further input into the development of their project. The Schools Partnership Coordinator organizes a follow-up visit by the mentors to the school for a final discussion in January/February to support students in the write-up of the projects.

Development of the EPQ Support Programme

Four years of development using feedback from students, teachers and researchers led to the current model of the EPQ Support Programme. The sections below detail this process, including the rationale behind the changes that were made each year.

Year 1

In 2013, the EPQ Support Programme was piloted. At this time, it was possible for schools to use the libraries on an ad hoc basis, so the main feature of this year's programme was mentoring by researchers. In the pilot, 40 students met 12 mentors in small groups rather than a central fair, and these meetings took place across a range of dates and locations. There was positive feedback from both researchers and students, but it was clear that the bespoke approach and the complexity of coordinating individual meetings would be unsustainable if the programme was scaled up.

From early on in the programme's development, it was clear that strong communication and collaboration between the school and the university was key, which was echoed across other SUPIs nationally (NCCPE, 2017: 32). At the time, Richard Wheeler commented:

We have been delighted to see the strong development of our partnership with Bristol University so far this year. Our dialogue with the team at Bristol has been exceptionally close and supportive. ... The impact of this has been to inspire students to think beyond the confines of their A Level specifications and to gain a vision of what their subjects might be at a higher level, and hopefully to aspire to such levels of study themselves.

Year 2

The EPQ Support Programme was refined in the second year (2014). A crucial development was to coordinate the library visits to involve more schools, with the appropriate support for students to make the most of the opportunity. The Public Engagement team collaborated with the Library Services team and the Student Recruitment and Widening Participation team to coordinate three structured visit days for EPQ students from schools in the wider Bristol area. In this first year of library visits, over 175 students attended from nine local secondary schools and sixth forms, and three further education colleges.

Formative evaluation of Year 1 activities were conducted by Paul Strauss, then at the University's School of Education (formerly the Graduate School of Education). Evaluation consisted of a one-hour focus group involving 9 of 40 mentored students, plus interviews and email feedback from teachers. This led to changes being made to the coordination and approach to mentoring. The informal discussions remained much the same, but researchers were asked to provide more advice about the research process and place less emphasis on subject-specific support. It was therefore easier to match students to mentors, as it could be based on their broad discipline. It also meant students had support on the process and practice of research, plugging a potential gap in teacher expertise. To simplify the coordination of meetings between researchers and students, the EPQ Mentoring Fair was introduced (November 2014), where all conversations could take place at the same time in the same place. This centralized fair allowed the involvement of a further SUPI partner school, and in total 40 students took part, supported by 11 mentors.

This year also provided the opportunity to put an emphasis on building mentor-mentee relationships beyond the one-off meeting. Email correspondence was encouraged (via teachers or a designated EPQ email address), and a second visit between students and eight of the mentors was organized in January 2015.

Year 3

The now-established programme presented an opportunity to reach new schools. The library visits in 2015 reached similar numbers, with 200 students taking part from ten secondary schools. However, having established a successful and easily scalable format with the Mentoring Fair, it was expanded to involve 74 students from six local secondary schools. The students were mentored by 20 researchers. A follow-up session at St Mary Redcliffe and Temple School involved 23 students from three schools and 11 mentors, with further follow-up activity via email.

Year 4

In 2016, the EPQ Support Programme came at a time when EPQ was becoming increasingly popular, with more schools offering the qualification and more students completing it. The library visits expanded to reach 13 schools, with over 200 students taking part. Following a restructure of the visitor scheme at the university libraries,

library services staff also reported an increase in EPQ students making return visits during the summer holidays. The Mentoring Fair involved 77 students from seven local schools, two of which had not taken part previously, mentored by 32 researchers. A facilitated follow-up visit was not organized this year, as many students and researchers kept in touch via email.

Outcomes for students over four years

Evaluation data were gathered throughout the four years of the EPQ Support Programme, with findings informing its development. Evaluation was led by Paul Strauss, initially from a research post at the School of Education in Years 1 and 2, and later as an independent consultant. Wan Yee (School of Education) also collected and analysed data in Years 3 and 4. Evaluation was conducted via a combination of methods:

- questionnaire surveys completed immediately post-activity (library visit or Mentoring Fair) by students, teachers and mentors
- focus groups of students in Year 13 (one term after receiving support)
- interviews with coordinating teachers at partner schools
- participant observation of library visit days
- follow-up interviews (semi-structured, by telephone) with four students who had been supported between two and four years previously.

It was clear from evaluation of initial years that many students perceived that the programme added value to their EPQ process. In the Year 1 pilot, when evaluation was conducted via a focus group with nine students, they described their motivations for choosing the EPQ. These included: strengthening university applications, doing it 'for the love' of their chosen subject or topic, or developing independent study skills for higher education. Describing their experiences of mentoring, they particularly valued the small-group format (typically 3–5 students per mentor), the personal attention to their projects and the relaxed, engaged approach of the researchers. This was echoed in all subsequent cohorts, with one student reflecting:

I think it was really helpful to have a specialist to talk to, even if it was only briefly, you know, to have someone who really, really knew the subject area ... say, 'Oh that sounds interesting, that sounds like a good idea'. And then also give some more constructive feedback: 'What about this? What about this?'

Some students said the support had increased their confidence in the university environment, after they had initially been nervous of it or found it alien. For instance, in a focus group in Year 4, two students reflected:

I think that it gave a very friendly impression of the university as a whole. Certainly my mentor – and I think most people's mentors – were just very engaging and genuinely interested in what you had to say. And like [another student] was saying, because it is a prestigious university it is nice to see the slightly more friendly, human face of it.

... I don't know, when I think of Bristol University, it's a very good one, one of the Russell Group isn't it? And so I didn't expect ... I thought it was nice that they helped us and treated us, like ... as they would any other university student. Because I'm definitely not an A* student that would

normally get into there, so I thought it was nice that he still talked to me in a respectful manner like that. It made it seem a bit less scary.

Several of the Year 1 cohort and their teachers noted that mentoring support could be significantly bolstered by supported access to university library resources. This was not least because source materials and further research avenues (including those recommended by mentors) were often academic books or paywall-protected journals that were otherwise inaccessible. This suggestion was incorporated in subsequent years, and questionnaire responses in Year 3, showed that 81 per cent of students found the library visits 'useful' or 'very useful' for EPQ preparations.

The Mentoring Fair evaluation was conducted by questionnaire survey. In Year 4, of the students who took part, the vast majority (91 per cent, $n=77$) did so when they had chosen a topic or research question and had either 'started' or 'nearly completed' the research stage, but had not yet started writing their dissertations. This appeared to be well timed for students, as 73 per cent stated that their mentor's input had been 'very helpful' or 'extremely helpful' to their projects, while a further 25 per cent felt it had been 'somewhat helpful'. Particularly helpful aspects were reported to have been:

- support and feedback clarifying, refining or amending research questions
- suggesting and/or signposting further sources
- advising on how to structure dissertations.

Understandably, students particularly valued mentoring when there was a 'close match' between their chosen topics and the researcher's expertise, which 58 per cent of students in the Year 4 cohort reported was the case. Matching students was a particularly difficult element of organizing the fair, which in part led to the reduced emphasis on mentors giving subject-specific advice to ensure more students could be supported regardless of their topic. Where students felt there was a 'reasonable' (30 per cent) or 'not close' (8 per cent) match, it was still possible for students to feel they had received useful input. For instance, such students noted they had gained from the mentoring 'general research methods advice', input and ideas about 'specifying [a] title', 'source referencing', or 'conducting my own research, which is what my mentor does'.

When asked what action they were likely to take as a result of the mentoring, students overwhelmingly referred to further reading and research, often naming specific sources, journals or online resources. Others mentioned adapting their research questions, dissertation structures and/or approach to research, including some who planned to conduct additional primary research.

Students were asked in their questionnaires whether the support of the university had 'changed [their] perspective on how to approach a research topic or access research findings': 64 per cent reported that it had, above the mean average of 45 per cent across seven different Bristol SUPI activities in Years 3 and 4 where this or a closely equivalent question was asked. Students offered comments including:

- [it] made me realize I need to be more thorough with research
- be open to taking chances
- writing bibliographies and referencing
- [pay] attention to source reliability.

Teachers were also included in the evaluation, through completing questionnaires after activities, and through informal interviews or email surveys. In Year 4, seven of the eight teachers who accompanied students to the Mentoring Fair felt that the session had 'provided students with knowledge and skills to facilitate successful completion of their EPQs' to a 'large' or 'very great' extent. Teachers said the most significant

aspects for the students were 'identifying key techniques for research' and 'being matched with an academic ... especially if that academic is able to challenge and/or develop the student's ideas'. One teacher noted that the most significant aspect of the mentoring varied for different students:

Sometimes [it's] specific advice and guidance on the topic area, or possible sources for research. Other students benefited from guidance on focusing their question, or approaching their write-up. For some, just a chance to talk was good for their confidence.

Teachers also acknowledged the university's role in reinforcing the support that students received at school, as well as specific expertise that university researchers and library staff were best placed to provide. Richard Wheeler commented:

Some of the things they could have got from school they didn't, and took from the university mentor. We [teachers] are the day-to-day norm of their lives, and we become just noise. So even the most basic things like structuring [dissertations], focus of questions, referencing – when told in a uni context by such a person [mentor] ... they were pointed towards resources or lines of inquiry that we wouldn't have been able to suggest.

Impact and significance

Impact for students

Telephone interviews were conducted with four former students who had participated between two and four years previously and were current undergraduates at UK universities. They were those it was possible to reach from a list of 12 students who former teachers suggested for interview. They were all students whose former teachers suspected had benefited from the programme and would have insights to share. Interviews with this small sample were not designed to be representative of the wider cohort of mentored students, but to supplement wider evaluation data and provide an insight into the potential longer-term impacts of the EPQ Support Programme. Further research using a larger, representative sample would be beneficial to gain further understanding of these possible impacts.

Former students were asked about their memories of completing an EPQ, and how it had been different to their concurrent A level studies. Answers all emphasized the marked difference between an EPQ and A levels due to the EPQ's 'self-directed' nature with 'no formal teaching'. This led to the development of specific skills or techniques, and/or encouraged a general disposition of 'pushing it a bit further' than A levels demanded. One student explicitly linked this to 'bridging' the gap between their A Level and degree studies:

It was ... an extra level of pushing it a bit further ... very much like a bridge, because the kind of stuff that I was doing for that [EPQ] essay, is a lot of the stuff that I do now in my degree. So it definitely did ... give me a first taste of those things that you do writing a university-level essay ... piece of coursework or research.

Asked what the university support had added, and whether it had changed their approach to the EPQ, students' answers suggested that crucial aspects had been access to library resources, learning how to reference, and the validation and constructive

feedback of mentors. Small interventions, such as a single key source suggested by a mentor, could seemingly have a big impact. For one interviewee, who had completed an EPQ on a topic that they described as 'off the beaten track' of their teachers' knowledge, finding an academic mentor who was a specialist on the subject 'enabled me to be less alone in the whole process'.

Another key theme in the students' descriptions was the opportunity to explore a new subject in depth. In some cases, this was a route into a subject not offered as an A level but later chosen as a degree course. Others said it had been a chance to 'test out' whether a subject they currently studied at A level was 'something that I enjoy doing in a bit more depth and more independently', as in degree study. In both scenarios, students reported that the opportunity to access university resources and support had aided their decision-making about further study, and in some cases boosted their confidence to aim at different or more difficult-to-access courses or institutions.

Students were asked whether they felt they had gained any 'skills, experiences or perspectives from their EPQ and the university support, which they still draw on in the present'. All referred specifically to independent study and research skills used in their current degree courses, in particular accessing, managing and citing source material. Several reported these had given them a 'head start' relative to their university peers. Three of the four also described an ability to critically evaluate sources as being significant, for instance: 'It's just learning how to look differently and think "is that a good source?", or "no, that's 50 years old, I probably shouldn't use that".'

Another remarked, similarly:

You have to see what's out there and also evaluate it a bit ... you read something and go 'hey is this useful to me? Do I agree with what they're saying? Do I ... trust what they're saying and will I incorporate this into my argument?' Whereas, yeah, previously there was not so much of that with [A Level] coursework.

A third student described using their skills in critically evaluating sources to research topics in current affairs using academic literature:

A good example of that is the recent NHS cyber-attack, so my interest is in computer studies. I wanted to find out more about that and how it could have happened, [and now] I would know what sources to look for to read up more.

Last, students were asked if completing an EPQ with support from the university had 'changed or developed their perspective on the concept of "research", and if so in what ways'. One interviewee commented:

I [now] know it's a lot of leg work and independent study ... and it takes a lot out of you! ... You hit dead ends ... they don't really talk about that in A Levels ... or you find out that [researchers] have not really done anything in [your chosen] area.

The university's perspective

Several UK universities, including those in the Russell Group, have recognized the EPQ as a valuable qualification in undergraduate applications, primarily due to the skills students gain through completing it (Russell Group, 2016: 10). A review of A levels commissioned by Ofqual found high praise for the EPQ in preparing students for

university. This was particularly due to its role in developing academic skills that can otherwise be lacking among students studying A Levels alone (Higton *et al.*, 2012: 71).

In the evaluation of the EPQ Support Programme, it was important to gather the views of the researcher mentors, both in the development of the programme and to assess its impact from the university perspective. In Year 4, mentors completed questionnaires developed by the evaluators in the SUPI team after the training session (to capture their previous experience in public engagement and their motivations to take part) and after the Mentoring Fair (to capture their experiences of mentoring students). In this year, 63 per cent were postgraduate students (mostly PhD candidates) and 30 per cent were academic staff (including two professors). The small remainder were non-academic staff and visiting researchers. Mentoring EPQ students is one of the few public engagement activities at the university open to researchers at any career stage and from any discipline. The questionnaires asked about their motivations for taking part. There was a significant theme, most notably among postgraduates and early career researchers, of gaining valuable experience of public engagement activity, mentoring specifically, or working with school-age students to bolster professional experience and CVs. For some, participation in public engagement or outreach activity was required or encouraged by their funders.

Several talked of their own motivations primarily in terms of altruism or personal enjoyment, describing wanting to 'give something back', or saying that 'I just enjoy teaching [and] helping students'. This may link with findings from earlier cohorts that for some there was little explicit value placed on the activity within their departments, and that taking part was something valued by them personally or beyond the scope of their university roles. However, this appears to have lessened over the four years, and in Year 4 many more mentors described being motivated to participate because of their perceived need to prepare A Level students better for university, or encourage them to consider studying the mentor's own discipline. This shift in motivation may be linked to public engagement and widening participation becoming valued more across the board in higher education. For some researchers, this motivation also had a degree of self-interest since, as one mentor described:

This sort of project ... leave[s] students in a much better position to begin undergraduate study. It promotes critical thinking through the requirement to explain their thinking. This will help ... turn sixth formers into exactly the kind of students I want to teach.

Some mentors particularly referenced the importance of the research element of the EPQ. One senior academic observed that 'UK pupils' in particular 'are not properly trained to do research'. These are interesting reflections, given that a survey of university lecturers showed that over 50 per cent said new undergraduates were underprepared for university (Suto, 2012: 2). With more students completing the EPQ, and particularly with the possibility of university support, this could have a positive impact on students' preparation for university. Other evidence supports this, with the EPQ being a good predictor of degree performance, 'with the highest percentage of first class degrees achieved by those getting top grades in the qualification' (Gill and Vidal Rodeiro, 2014: 5).

Summary and next steps

This case study has outlined the outcomes for students supported by the University of Bristol's EPQ Support Programme. The evaluation suggests the programme particularly

aided students in completing the EPQ through resources, subject-specific advice and in changing their approach to research. Evaluations of all participants (students, teachers and mentors) highlighted the benefit of the EPQ in promoting independent research skills and critical enquiry. The programme also increased students' familiarity with the university environment. Longer term, the evaluation suggests that some students may be better prepared for university study by completing an EPQ with the support of the university, and that it can influence students' perspectives on research. For the researcher mentors, they increased their experience in public engagement and it allowed them to support the next generation of students, which could have a positive impact on their teaching. The case study has also provided an example of the benefits of partnership working with schools: the intrinsic value of collaboration in initiating activities that have mutual benefit for schools and universities, and a shared commitment to developing and sustaining them (Handscomb *et al.*, 2014: 6).

Following four years of evaluation and development, the EPQ Support Programme (comprising library visits, the Mentoring Fair and follow-up activities) provides a model for other UK universities to use and continue to evaluate to gain further insight, for instance by comparing student-level outcomes within and without such interventions. The initial evidence suggesting that the EPQ helps prepare students for university study (Higton *et al.*, 2012: 71) provides a compelling case for university support. Sir Roy Anderson (2014: 7) recommended in the *Making Education Work* report that 'project work evidenced by the Extended Project and other qualifications should become a key requirement for university entrance'. If this recommendation is adopted, the role of universities may become more significant, particularly as their resources and expertise cannot necessarily be provided by schools.

Universities are therefore well placed to support students to achieve their full potential in the EPQ, irrespective of their academic background and the resources of their school. It is clear that UK universities could play a crucial role in fostering independent research skills and critical enquiry among students. These skills will prepare them for university life and beyond, at a time when the need for a new generation equipped in these skills and empowered to engage with, and respond to, global shifts and challenges is particularly pressing.

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Paul Strauss is an independent research consultant specializing in evaluation and impact measurement. He was the external evaluation lead on the University of Bristol's SUPI project from 2015 to 2017. He was previously the internal evaluator, while holding a contract research post at the School of Education from 2012 to 2014.

Richard Wheeler is Assistant Head Teacher and Head of Sixth Form at St Mary Redcliffe and Temple School, a comprehensive school in Bristol with a sixth form of over 600 students. He has taught at the school for 14 years, teaching maths, philosophy and religious A Levels, and coordinating the EPQ with large cohorts of students and a high success rate.

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