

**Christ the King College/London G&T
London Schools Excellence Fund Project**

Findings; What has our research indicated to us?
Ian Warwick



Key elements of the project

LGT

The project aimed to investigate the pedagogical approaches utilised in independent schools for the most able in the core facilitating subjects of Maths, English, Biology, Chemistry and Physics in order to identify teaching and learning strategies in these subjects that make the difference. The project set out to answer the following questions:

1. What strategies do independent schools utilise to ensure their pupils achieve top grades in English, Maths, Biology, Chemistry and Physics and how do they secure places for their students at Russell Group universities in such large numbers?
2. Are the strategies transferable to the state sector and can they be scaled up so that they can be made available to a wider community across London?



Key Findings

LGT

A* skills and behaviours (*What do they look like for each subject area and what use can be made of them?*)

Developing those A* skills (*What strategies and resources did students report would offer appropriately challenging lessons?*)

Subject specific barriers (*What subject specific barriers face teachers regarding improving A* teaching approaches at KS4 & KS5?*)

Improving teaching approaches (*What are the most effective ways that these barriers can be overcome?*)

Principles of high challenge (*How can the principles be most effectively implemented across a school?*)



Key Findings

LGT

Nurturing an excellence culture (What wider school approaches work?)

Super-curricular activities (How do these activities and resources benefit students and take them beyond the syllabus confines?)

Character traits (How can schools develop and embed key traits and what benefits will be gained?)

Professional cross-sector research (Why can this be valuable and how might this add to my teaching?)

Tracking student progress (What does good monitoring look like and mean to departments?)



1. A* skills and behaviours

What do the key A* skills and behaviours look like?

We investigated what the most significant A level A* skills and behaviours looked like across all five subject areas, including the specific science specialist ones and the additions offered by teachers. These serve as a useful kick off point in discussions within schools to highlight which are being taught well, and which need a clearer focus

Our research indicated...



English

LGT

Asks questions to challenge and develop thought and recognises and accepts ambiguity.

Shows a perceptive critical faculty which enables connections and judgments to be made within and beyond texts.

Uses an unusually wide vocabulary, often accurately, sometimes experimentally and can often read constantly, voraciously, even indiscriminately.

Expresses ideas succinctly, sometimes elegantly but may feel detail or support is so obvious as to be unnecessary.

Identifies main issues in debates and devises strategies quickly to deal with them, in many roles, perhaps in unorthodox ways.

Understands registers instinctively and can react creatively to others' ideas to mediate and develop them.



Maths

LGT

Works quickly but may make mistakes in calculation but may also consider the elegance and efficiency of alternative lines of enquiry.

Develops individual non standard methods for solving problems, and skimp on explanations but may be able to justify them.

Sees the implications of concepts quickly, but may complicate problems by thinking of other implications or restrictions.

Takes unexpected sidelines or develops short cuts, by making connections to different branches of maths and applying them.

Examines the strategies adopted when investigating within mathematics itself or when using mathematics to analyse tasks.

Includes mathematical justifications, distinguishing between evidence and proof and explains their solutions to problems involving a number of features or variables.



Science

LGT

Observes with insight, offering perceptive interpretations and extrapolations.

Asks novel what if type questions, making links to prior knowledge but with lateral twists.

Sees relationships between variables and makes perceptive explanations of hypotheses.

Makes intuitive leaps in different situations, showing genuine curiosity and persistent interest in topics.

Absorbs new concepts rapidly demonstrating a great interest in the bigger questions such as the nature of the universe.

Reluctant to accept simplified explanations or to work on anything which is low level and unchallenging.



Additional Components

LGT

Of the suggested 'additional' components that make an A/A* student, there is a great deal of similarity from state/independent schools:

'Intuition' was by far the competency considered most important and indicative of exceptional students, followed by creativity and critical thinking.

In addition:

Ability to use technical language/ academic vocabulary effectively

Ability to apply existing knowledge to new challenges
Curiosity in the subject more broadly than the immediate context or topic



2. Developing A* skills-student views

LGT

What did students report about how their learning experiences could be strengthened for A level?

We focused on which lessons and scholarship programmes of study might develop these skills and behaviours (perhaps in earlier years to avoid the pressure being put too exclusively on the two year A level course), and what type of lessons or mentoring are most effective, how to maintain student investment and balance both teacher and student time commitments and workloads (and what strategies, resources, sources and texts offer appropriately challenging lessons)

Our research indicated...



2. Developing A* skills-student views



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Our research indicated...



2. Developing A* skills-student views-English

LGT

The students across the sectors shared some common views about how their learning experiences could be strengthened for A level English, with both groups often requesting more focus on exam techniques, more essays and feedback, encouragement to read more (and checks by the teacher that this is happening) and the opportunity to study a wider range of texts and authors.

They also said they would like better time management in terms of the time distribution spent on different parts of the course. Although few comments related to behaviour, both groups did say they wanted to see a teacher focus on those in the class who wanted to learn.

2. Developing A* skills-student views-English

There were also some notable differences in the students' responses: SS students' comments predominantly focused on a desire for teachers to use more technical/practical approaches to help them improve, e.g. more handouts, mock exams and past papers; whilst these were of importance for independent students their responses more strongly reflected wanting to improve as independent learners, wanting to read more widely and wanting to develop their subject knowledge and passion.

More frequently than their SS peers, they also cited a wish to develop wider contextual knowledge and to focus more on the specifics of grammar and semantics.

2. Developing A* skills-student views-Chemistry

LGT

The students across the sectors shared some common views about how their learning experiences could be strengthened for A level Chemistry, with both groups stating they would like more frequent use of practicals as well as stronger links/application of these to the theory and specification content.

Both groups also wanted additional opportunities to learn in and beyond the classroom, e.g. journals, books, lecture attendance as well as more interactive learning opportunities in the classroom, more explanation of complex concepts and more testing to assess their understanding.



2. Developing A* skills-student views-Chemistry

LGT

SS students made more requests for exam preparation support such as notes, past papers, workshops, revision resources and good online Moodle support as well as competitions to drive motivation.

Interestingly, there were occasional comments about the transition to A level work and a concern to ensure that GCSE foundations were solid. In contrast, the IS students were asking for more challenging work; they too wanted more application of theory to the real world along with more structured lessons.



2. Developing A* skills-student views-Maths

LGT

The students across the sectors shared some common views of how their learning experiences could be strengthened for A level Maths.

They wanted more opportunities for exam practice but many also were concerned to first ensure that the basics were well covered and that previous learning had been consolidated.

Both groups also requested for more varied learning approaches in the classroom; they were keen to experience more interactive and engaging learning through group work, peer coaching and competitions.



2. Developing A* skills-student views-Maths

Both groups were also concerned about the pace of lessons, and felt that the pace needed to slow at times in order to embed understanding.

Some students specifically asked for teachers who were capable of explaining complicated concepts in a clear and concise way. The KS5 SS students more frequently spoke about concerns to ensure that concepts are securely understood and for work to be revisited throughout the course and in the revision period.

IS students made greater reference to wanting more challenging 'off-spec' work, more differentiated responses to match ability levels and more real-life application of the Maths studied in class.



2. Developing A* skills-student views-Physics

LGT

The students across the sectors shared some common views of how their learning experiences could be strengthened for A level Physics, with both groups seeking a stronger focus on ensuring that understanding is secure and consolidated through sound teaching and this to be accompanied with deeper, clearer explanations and feedback.

Both groups cited a need for specialist 'expert' teachers who were knowledgeable and well-prepared for the lesson; they wanted more 'hands-on teaching' and fewer worksheets. For both groups, the quality of the teacher seemed to be a critical issue.



2. Developing A* skills-student views-Physics

LGT

Many students requested for more stretch and challenge as well as more support for examination preparation, e.g. more detailed notes, greater use of exemplars, better textbooks and extra readings. The SS students asked for more trips and more online support and resources to help understanding and revision.

The IS students requested for more practicals and a greater real world application of the Physics taught in class with more visualisation of concepts to inform their understanding.

Although they were interested in exploring their own interests in the subject, they did raise some concerns about teachers going 'off spec' before the syllabus had been sufficiently covered.



2. Developing A* skills-student views-Biology



The students across the sectors shared some common views of how their learning experiences could be strengthened for A level Biology, with both groups wanting their teachers to ensure the students' understanding of the syllabus content was secure. They requested stronger explanations, more repetition, revisiting and reinforcement of content and also more practicals.

They felt that practicals needed to be accompanied with stronger explanations, feedback and discussion. Both groups asked for more active/interactive learning approaches to develop their understanding and enhance engagement; both groups also wanted an earlier and more timely approach to exam practice with greater assistance from teachers in the form of notes, summaries, questions and feedback.



2. Developing A* skills-student views-Biology



SS students focused more on study skills e.g. wanting ways to memorise and retain knowledge, more workshop/revision sessions and occasionally to be given more homework.

Several students were concerned about the quality of the teaching in terms of subject expertise, group management and overall time management of the course itself.

The IS students more frequently reported the need for opportunities to explore their own interests in the subject and raised concerns about sufficient coverage of the syllabus. They wanted to prepare well for content-rich classes with extra readings but, in a few cases, there were suggestions that secure notes and a wider range of textbooks accessible at student level would be helpful.



3. Subject specific barriers

What subject specific barriers face teachers regarding improving A* teaching approaches at KS5?

We looked at how to facilitate up-to-date subject knowledge which is absolutely critical for equipping teachers with high levels of confidence and the professional ability to challenge and extend their students' learning and to convey and instil a passion for their subject

As well as more general problems such as the dearth of high challenge CPD opportunities (and the lack of high quality stretch and challenge resources)

Our research indicated...



Science barriers

Students inability to fully understand the requirements of the question, to use their taught knowledge to explain unknown and unfamiliar facts and to form synoptic links between topics.

Students can arrive with low expectations, low motivation and a preconceived idea that Science is difficult but GCSE can also give students the false idea that they can cram science at the last minute and still obtain a high mark.

Students can lack cumulative understanding and as science builds on basic principles this can make more advanced study not only challenging but frustrating.

Students may not have a high enough degree of literacy and may need to be taught all the keywords to extend both their academic and scientific terminology and literacy.



Science barriers

Many students are not independent learners and would like to be merely 'told' the answers.

Teachers are strong when it comes to teaching exam technique but sometimes weaker delivering any lessons beyond specification points. Change will not occur in one exam group. It will take a number of years and must be a school inclusive policy, not restricted to the Science department.

There is a lack of lesson time to properly build up their study skills. A lot of the stretch & challenge work is set through independent learning, which they do complete in their own time.



4. Improving teaching approaches

LGT

What are the most effective ways that these barriers can be overcome?

We investigated how to develop a clear understanding of what has been learnt regarding the significant barriers identified regarding A* achievement by each subject area and to support students in their ability to offer A* responses, gain subject mastery and reinforce scholarship.

We also looked at wider factors such as constricting cultural or peer expectations, external locus of control, lack of academic literacy, cultural capital or long concentration spans combined with fixed dependent mindsets resistant to new ideas)

Our research indicated...



What would practically help in Science?

LGT

Enabling students to answer questions in sufficient detail, using the appropriate technical terminology, especially when presented with novel or synoptic questions

Employing preparatory materials in bridging the knowledge gap between GCSE and A level, so that a greater proportion of lesson time becomes dedicated to tackling the more challenging aspects of the topic and stretching the more able students

Sparking the interests of students both within and outside of the classroom in the bigger concepts of science

Clarifying the level of specificity required in student answers, compared to GCSE. They critically need to express ideas with accurate and technical terminology and have misconceptions in language - how the meaning of words changes from KS4 to KS5



What would practically help in Maths?

LGT

Going beyond the syllabus and running enrichment activities incorporating involving advanced level topics in mathematics and on higher order problem solving which are outside the syllabus. In particular preparing students for STEP, AEA and MAT papers, which require problem solving beyond A Level.

Including stretch and challenge activities in every lesson and providing advice to students on what is expected in interviews at Russell Group universities. Visits and extracurricular trips should be taken by these students ie Maths Inspiration, Institute of Education.

Improving the confidence of students to tackle problems alone. We need to guide students to 'make connections' between the various branches of maths and see how it all fits together. Weaknesses not being identified damage student confidence which in turn obviates the possibility of giving them practice on the topics they need and damages their self belief.



What would practically help in Chemistry?

LGT

Students understanding what a chemical reaction is and the maths behind it and being able to balance equations

being able to link 'smaller' concepts to the bigger picture to widen understanding

Run a science society solely by the pupils. They choose speakers to talk about things that interest them - from the chemistry of the stars to looking for a cure for Malaria to the science of black holes. The students can run their own discussions on medical ethics

Science enrichment lessons, RSC starter questions, Lectures at RI/ UCL/ Imperial, Chemical Analysis competition held at Queen Mary College, Chemistry Olympiad, science society and the opportunity to edit and write for the school science magazine all help the high achievers to do better.



What would practically help in Biology?

LGT

Regularly give pupils articles from Biological Sciences review or Nature to read.

Teach a topic to a substantially higher than necessary level for the specification.

Offer a Biology Society, which is a discussion group for talking about recent Biological issues in the news.

Establish library access to a number of online biology publications which can be e-mailed to staff – a quick and easy way to stay on top of breaking news.



What would practically help in Physics?

LGT

Ways to help able students to address low literacy levels – over 40% of the papers in Physics are now explanation based rather than calculation - and too often students do not appreciate what the question is asking and what it expects; being able to translate keywords in an exam context is vital; being able to write in a classical mode - students don't know what to write or sometimes what to assume the examiner knows

Ways to give students experiences beyond the syllabus and require students to engage more deeply with material such as relativity

Improving their ability to apply their existing knowledge to explain unknown concepts and understand other situations and also being able to observe with insight, usually offering perceptive interpretations and extrapolations are important as well as the ability to convey the key ideas in an intelligible way.

5. Wider principles of high challenge

How can the principles be most effectively implemented across a school?

We investigated the wider principles of high challenge in classrooms, including the faster pace of lessons, ways to demonstrate and improve teachers' strong subject knowledge, encouraging student risk taking, differentiated approaches to teaching, the commonplace use of critical questioning to challenge and extend learners, higher levels of expectations by staff, students and institutions and synoptic content that requires links between topics and concepts

Our research indicated...



5. Wider principles of high challenge

The data strongly suggests that ensuring teachers are sufficiently knowledgeable and expert in their subject areas and that they have opportunities to update is critical to the students' learning experience in the classroom and to their outcomes.

In the second survey, staff in the SSs reported having become more involved in academic subject updating, for example through subject INSETs and engaging with research.

The involvement of teachers in the online subject-specialist networks and the opportunities this provided for professional communication, collaboration and exchange with others was seen to be of significant benefit to many teachers involved in the project – especially in terms of allowing them access to more high challenge resources.



5. Wider principles of high challenge

For some ISTs there seemed to be a separation of the ‘learning phase’, involving strong emphases on exploration and risk-taking, from the ‘examination preparation phase’ where there seemed to be a more ruthless focus on examination technique and practice. This separation was possibly working to the advantage of IS students.

Many lessons across both sectors had a focus on exam requirements/technique and questions. SSTs tended to rely on technical/practical preparation for A*, e.g. past papers, revision classes, whereas the approach in ISs was more focused on attitudinal and extra-curricular/enrichment activities to drive forward students’ ambitions and expectations.



5. Wider principles of high challenge

Resources, exemplars of A*/A work, setting/streaming and strong guidance from the exam boards were seen by both groups as the best ways to nurture performance. Student booster sessions were more frequently mentioned by SSTs while ISTs listed enrichment/extension activities.

The passivity, lack of energy and low expectation in some SS classrooms failed to motivate students. As a result, some able students seemed to remain passive and compliant, unaware of the wider landscape of learning. It was clear that in many cases SS students had low expectations of themselves. Some SS students who were questioned could see little point to the learning beyond the exam.



5. Wider principles of high challenge

Providing stretch and challenge for the most able within a mixed ability setting remains an issue for many teachers; indeed by the second survey, the views of the ISTs seemed to have become more firmly embedded in this regard.

In this follow-up survey, KS5 SSTs also reported the need for setting and streaming by ability, particularly in Maths and Sciences, as a means for creating a ‘critical mass’ of more able students.



5. Wider principles of high challenge

The provision of stretch and challenge for the most able students was far more frequently observed in the ISs than in the SSs

ISTs commented that SS students could have made greater progress or been given better pace in their lessons. This related to the kinds of questioning, challenge and dialogue observed in lessons, all of which helps to foster a curiosity and a sense of discovery about the lessons and which develops students' intellectual curiosity; in turn, this links to the development of their academic confidence

Excellent use of questioning was seen to enhance the learning by encouraging students to explore beyond the boundary of the lesson



5. Wider principles of high challenge

Risk taking in learning and allowing students to make mistakes and then learn from them was noticeably a part of the IS classroom culture. Wrong answers were viewed as learning opportunities

Finding out what students know and exploring was more important than 'telling' even where a strong didactic element was present

In contrast, what emerged from the research observations was a sense that SS students were not being given opportunities to fail in the same way and hence their resilience as learners was less, with some of the observed students giving up more easily when faced with difficulty.



5. Wider principles of high challenge

The data suggests there is a possible link between classroom management and lesson length - with shorter lessons allowing for greater focus and higher levels of student engagement seen in the ISs

Lesson time in the ISs tended to be significantly shorter, around 35-40 minutes (which allows time for students to participate in clubs and societies over a long lunch break) while the SS lessons were 60 minutes or more. Some of the ISTs felt that SS lessons were 'too long for students to focus'.



5. Wider principles of high challenge

LGT

Although planning was evident, it was much less prescriptive lesson-by-lesson in ISs. Lessons were much less driven by explicit learning objectives or by examination assessment criteria. Model answers and past exam questions were seen being used more in the SSs

Far more lessons in the ISs were didactic but context and real world application were also greater and lessons appeared to build on the linking of ideas and prior knowledge and encouraging students to 'think'

The students' attitude and their willingness to explore and enter into discourse was significant. The formulaic and prescriptive nature of teaching and learning in some classes was seen by some ISTs observing SS lessons to inhibit creativity, curiosity and risk-taking.



5. Wider principles of high challenge

Expectations regarding work outside lessons – these seem to be generally reinforced at every level in the ISs. Students there were stretched and challenged both by their teachers' and their own high expectations

The amount of independent learning that happened outside the classroom was greater in ISs compared to SSs; homework and prep were used much more as indicators of progress with students being prepared to spend much more time learning outside of lessons when they struggled with a topic

There appeared to be lower expectations in some SS classrooms and a sense that too little was expected of SS students outside lessons; this suggests that teachers need to demand more.



5. Student Requests for high challenge

LGT

Both groups wanted more focus on techniques – to develop better time management and to learn how to demonstrate excellent subject knowledge in order to achieve highly, more essays, feedback and guidance on structuring essays to them improve

They felt this would raise their confidence levels for the exam, as well as encouragement to read and research more widely, and to be ‘checked on’ that this is happening – to develop broader and deeper understanding and to be better prepared for in-class learning

They wanted more trips/visits to develop and deepen understanding and encouragement to learn beyond the syllabus and to have opportunities to explore interests and develop broader knowledge.



5. Student Requests for high challenge

LGT

When asked how their learning experiences could be improved, both groups of students requested for more practicals (in Sciences), more interactive resources, greater variety in lessons and a greater application of what is learnt in class to the real world

IS students felt they needed more time to consolidate learning and thus would appreciate a slower pace; they were keen to explore subjects in depth

SS students also asked for more enrichment experiences, trips in particular; there was also some small mention of smaller class sizes and a desire for streaming/setting.

6. Nurturing an excellence culture

What wider school approaches work?

Make what contributes to a high challenge excellence culture across a school more explicit with a specific focus on how to offer more specialist support and guidance for Russell Group entry, how success, high standards and appropriate levels of progress are defined, teaching to the top through deliberately and explicitly demanding work, establishing clear expectations regarding accuracy and precision in the use of high level subject specific language and how to normalise academic excellence and rigour

Our research indicated...



6. Nurturing an excellence culture

Having greater apparent freedom might mean independent teachers can innovate and take more risks, such as going off topic and not teaching so overtly to the test

It might also mean that they see the journey to A* as far more exploratory, and possibly assume that their most able students will be able to attain the top grades, so they give them more enrichment time

The State school teachers seemed to have far less time for this which means the more able students seem to benefit less from stretch and exploratory activities.

6. Nurturing an excellence culture

Extension and enrichment

ISTs offer more subject extension and enrichment than the SSs. It is clear that there are many more 'societies' to be part of in the ISs and that there is a vast range to support students' varied interests.

Survey responses indicate a seeming poverty of aspiration amongst some of the SSTs in terms of their provision of these activities and having less time to commit to the provision of stretch and challenge for the most able

Seen as 'more of the same' in SSs as opposed to fun exploration in some of the IS lessons observed. Some SS students prioritising hobbies and 'outside' activities over their academic work and thus failing to take advantage of the enrichment and extra-curricular subject activities on offer. How to extend learning for the more able in groups with a wide ability spread and how to ignite student interest in the subject beyond the scope of the lesson?



6. Nurturing an excellence culture



The institutional mission is a powerful force in the ethos of each school/college and sets the tone for the strong values that flow as a result

Threading through the holistic approach to students' development is a clear sense of ambition and assumptions of excellence

This is underpinned by a vocabulary of excellence and a strong work ethic. A growth mindset instils a sense of self-belief and students are challenged to develop off-the-spectrum thinking. Teachers act as role models of excellence.



6. Nurturing an excellence culture

In the context of the development of the whole person, the highest level of scholarship seems to be a key feature of learning approaches

The scholarship mindset is described as an attitude of mind, not a description of intelligence. It is about intellectual curiosity and independent study and seeks to create independently-minded and academically curious students

The schools/colleges understand their role in fostering this expertise and are able to customise the opportunities to do so as required. Teachers model scholarship through their work.



6. Nurturing an excellence culture

Expectations of students are set at application and reinforced throughout a student's time at the school/college. Students are required to attend extracurricular activities, to be involved and to be busy; they are relied on to adhere to deadlines and to complete work set; they are called on to excel and to make their mark

Engagement with school traditions and routines is insisted upon. Peer group influence is seen as playing an important role in reinforcing expectations, with older students being expected to model behaviour for younger students. Competition, collegiality and collaboration are used as key tools in this regard and are underpinned by the notion that success is the norm.



7. Super-curricular activities

How do super-curricular activities and resources benefit students and take them beyond the syllabus confines?

Clarify what supplementary or super-curricular activities/resources benefit students and advance, develop and enrich their learning, challenging them to go far beyond the specification and focusing them on the 'where next?' horizon by encouraging activities that allow exploration of aspects of the subject beyond the confines of the syllabus, such as entering national and international competitions, combined with past AEA exam papers and the use of ELAT papers and Pre U Global Perspectives, exploring a subjects' big issues and complex concepts (including subject specific extended reading)

Our research indicated...



7. Super-curricular activities

LGT

IS students tend to be prepared by subject-specialist Oxbridge graduates whilst SS students receive their counselling via the institution's careers service

Out-of-class enrichment and beyond the syllabus resources and opportunities designed to develop scholarship were also marked areas of difference between the state and independent schools

The findings from the second staff survey mirrored the findings from the first in this regard; levels of staff confidence to offer what is required for students to achieve at the highest level remained higher in all categories in the ISs.



7. Super-curricular activities

In terms of extra-curricular activities and support for subjects outside of lessons, SS students' responses indicated tendencies to get involved in outreach programmes, revision activities, conferences; there was much less by way of trips abroad to practice languages, exchanges etc

Conversely, the IS students frequently reported involvement in a comprehensive and wide-reaching range of extra-curricular activities including community service; some activities were competitive in nature and some were entirely organised and managed by the students themselves

There is an expectation that all students will participate in such activities and this is seen to be critical to the education of the 'whole' person. In contrast, in the SSs, some students' motivations to become involved in such activities was much lower and they did not always seem to see the benefits of participation. Notably, IS students reported much higher levels of tutoring outside of the classroom.



7. Super-curricular activities

LGT

By the second survey (by which time students had actually submitted their applications), the number of SS students applying to Oxbridge was dramatically lower than their counterparts from the ISs: 1.5% (1 of 66) compared to 39% (43 of 109). These figures are interesting given that the SS students' confidence levels in their own academic ability were the same or very similar to the IS peers

In their responses about future careers, IS students suggested a broader plethora of responses including the civil service, humanitarian work, creative work e.g. acting or working in the opera. They also used terms not found in the SS students' responses, such as working in academia or 'a job in the city'



8. Character traits

How can schools develop and embed key character traits and what benefits will be gained?

Address and bolster the significant character traits that can seriously impact on students' ability and confidence to progress in gaining A*, such as academic resilience, independence and bravery, determination and a willingness to participate without fear of being wrong, and explore how can these be improved individually as well as to develop more beneficial peer group identities and expectations across a school

Our research indicated...



8. Character traits

Independent school students seem able to apply new concepts and ideas more easily and more frequently cite that they enjoy their academic work

State school students' responses indicate fewer of them believe they can achieve high grades – a higher proportion feel frustrated because they feel they are capable of achieving more; they more frequently requested for more stretch and challenge in their learning

State school students are far more likely to work in their own time to overcome academic challenges.



8. Character traits

In their baseline survey responses (conducted shortly after the project began), SS students reported feeling less confident overall than their IS peers; fewer believed they could do well

Interestingly, by the time they were re-surveyed almost a year later the SS students reported more confidently on their teaching and learning experiences with many citing key factors including improved study skills, time management and growth in independent learning skills.



8. Character traits

Significant differences in the way students deal with the transition to A level - failure is not seen as an option for IS students with some reporting on the considerable work they need to do outside of lessons in order to 'keep up'

A few comments in the second student survey indicated the frustration felt by some of these students: 'most of my understanding comes from the extra work I do outside of the classroom, I rarely understand in class...'



8. Character traits-student views

LGT

What creates academic confidence:

Persisting in the face of challenge/tackling difficult areas in learning

Feeling unafraid to tackle new and unfamiliar concepts

Enjoying being stretched and challenged in learning was also an indicator of academic confidence, rated more highly by state school students

Being able to use and apply knowledge flexibly



9. Professional cross-sector research

LGT

What works in setting up effective learning partnerships and what doesn't?

Reflect and demonstrate the core principles needed to set up and encourage professional cross-sector research collaborations that enable teachers to work and think together in a range of ways to powerfully enrich teaching and learning for both parties encouraging them to reflect on their own and their peers' practices, develop new thinking and practices and renew both passion and enthusiasm for their subject by building trust and focusing on what deep rooted problems affect the teaching of their subject

Our research indicated...



9. Professional cross-sector research

Key features of effective subject networks

Purpose and focus (*what difficulties are faced by the teachers involved*)

Leadership (*What whole school lessons can be learned and shared?*)

Accountability (*How will the final impact of the networks be assessed?*)

Relationships (*How will you build the trust essential to the network?*)

Collaboration (*How will staff and students learn with and from each other?*)

Building capacity and support (*How will other organisations extend reach and improve impact?*)



9. Professional cross-sector research

LGT

Effective transferable practice

Is based on a positive paradigm not a deficit model

Is accessible, rather than tied to its context

Is not always exemplary practice

Is about core resources, not definitive guidance

Is based on defensible claims



9. Professional cross-sector research

LGT

Elements of the CTK strategy;

to award up to twenty Professional Development Bursaries across the college

to fund and provide an opportunity to benefit from three research methods workshops run by Warwick University

to further develop curriculum networks to strengthen professional communication between teachers across the three CTK sites (currently fifteen different subject networks which are attended by over 150 staff)

to make available staff study bursaries to both support and teaching staff each year to assist with course fees for Masters Degrees or further study



9. Professional cross-sector research



Elements of the CTK strategy;

Future research planned will explore and test some of the outcomes from this current research

It will build on the work with independent schools to evidence, develop, deliver and test a key stage 5 character education programme that focuses on teaching and learning pedagogy as well as wider progression and enrichment and where we make explicit and actively foster the character traits highlighted in our CTK vision for students.



10. Tracking student progress

What does good monitoring look like and mean to departments?

Reflecting on the significance of teacher feedback, monitoring and assessment, which according to Hattie is the single most impactful strategy, we investigated what the main differences were between independent and state schools. To what extent was the use of targets shared, and what was the frequency and detail of the feedback?

Our research indicated...



10. Tracking student progress

LGT

In the SSs, research indicated variability with little checking of understanding in the some of the subjects observed. Where developmental/formative feedback was generated lesson-by-lesson this enhanced the subject and also the level of student motivation

In some ISs, prep and homework were marked and feedback was rapid and there was an expectation by students that this would be the case. Overall, marking appeared to be of higher quality and frequency in the ISs.



10. Tracking student progress

LGT

The frequency of marking and detail provided in formative assessment and feedback was reported more often by SSTs in their observations of IS lessons.

In some SS lessons seen there was a sense that too little homework and prep was set and that there checking what had been done happened in a more ad-hoc way. However, praise and encouragement were reported by ISTs as being used well in the SS lessons they observed.



10. Tracking student progress

Little time was spent on tracking and monitoring student attendance and performance in ISs – there was also a noticeable lack of a target driven culture as well as greater autonomy within departments and all of this may be worth considering

Where departments worked together to develop resources for stretch, challenge and engagement, it was evident that this enthused and motivated staff etc.

A sense emerged from some of the observations that the use of target grades in the SSs may be placing a ‘ceiling’ on student and teacher expectations. An individual comment from one KS5 SS student asked ‘What’s high? I achieve my target grades’ – which perhaps suggests either a lack of motivation and/or a completely different mindset to study?