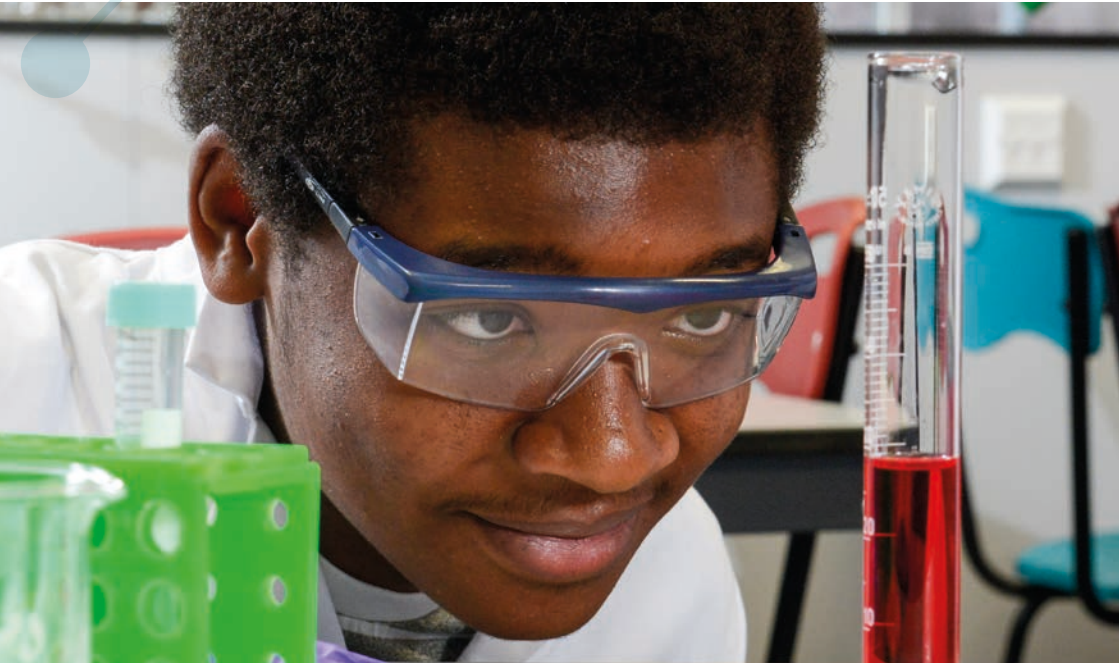


Opening up the **STEM pipeline** to young people of all backgrounds

GENERATING
GENIUS



*“I had the talent, but
Generating Genius showed
me how to achieve”*

OUR STUDENTS AND ALUMNI
IN THEIR OWN WORDS



Social Mobility and
Child Poverty
Commission

“Social justice ... has to be about unleashing people’s aspiration to succeed. Not just to leave school with good results but to get into a good university.”

SOCIAL MOBILITY AND CHILD
POVERTY COMMISSION, 2015



Introduction

In the 11 years since I founded Generating Genius, so much has changed. Yet far too much has stayed the same.

My original vision for Generating Genius was to support talented young men from an African-Caribbean background – then the lowest-performing group in British schools – to overcome the narrative of failure that surrounded them and help them to achieve at the highest academic level.

Now, of course, it is white working-class boys who lie at the bottom of the attainment table and Generating Genius works with young people of all ethnicities.

Then, the attainment gap between poor children and their wealthier peers, and the under-representation of young people from disadvantaged homes at university, received scant attention. Now, all the main political parties proclaim themselves champions of social mobility. And where programmes to encourage young people from disadvantaged backgrounds to apply to university were rare or non-existent, total investment in widening participation in 2014-15 was an eye-watering £1.4 billion.

But still the odds for young people from disadvantaged backgrounds are firmly stacked against them. Only last year, the Social Mobility and Child Poverty Commission reported that low-ability, wealthy children are overtaking their high-ability, poorer peers during school. And only 2.2% of young people from areas where few progress to higher education reach the most selective third of universities compared to 18.1% of those from high-participation areas, making them eight times less likely to do so.

Similarly, only 3% of disadvantaged 18-year-olds enter “high tariff” universities (such as the Russell Group) compared with 21% of those from the most advantaged backgrounds.

With so many organisations and so much political effort now focused on levelling the playing field for disadvantaged young people, it is heartening to see a growing body of opinion supporting Generating Genius’s approach.

We believe our students and alumni are best placed to give insight into the impact of the work we do, which is why we have decided to share some of their stories in this booklet.

C. A. Sewell

Dr TONY SEWELL





What is Generating Genius?

Founded in 2005, we are a registered charity. Our programmes help level the playing field and put young people from challenging or disadvantaged backgrounds in the running for places at top UK universities and – in turn – into careers in Science, Technology, Engineering and Maths (STEM).

There is a well-publicised shortage of STEM graduates.

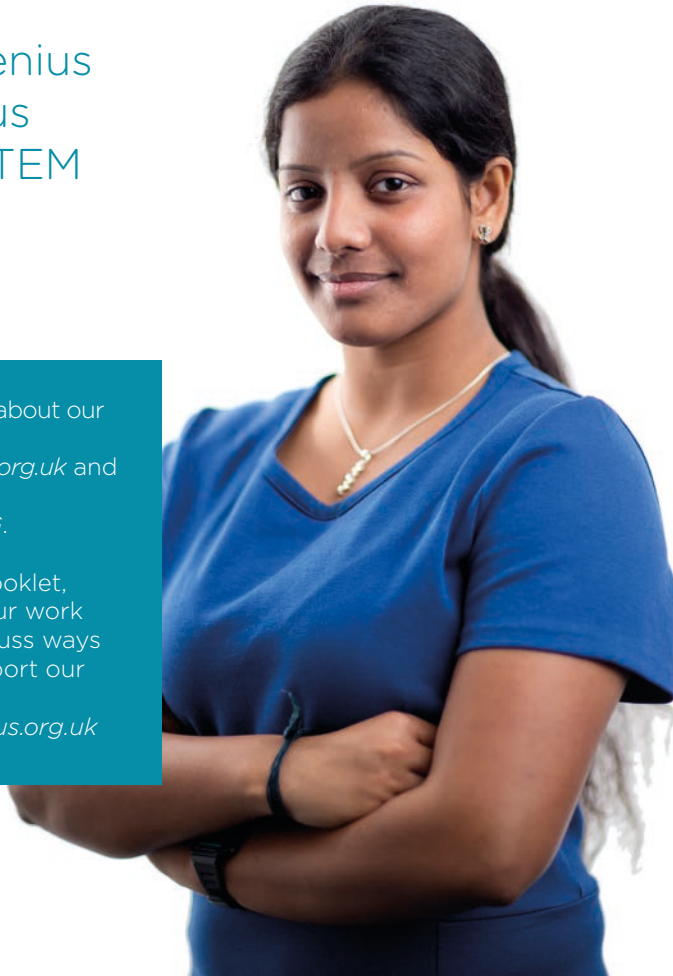
Increasing the number of young people studying STEM subjects is a priority for Government. But additional support is needed to widen access and help young people in challenging or difficult circumstances enjoy the opportunities provided by STEM subjects. Sustained intervention throughout secondary school is far more effective than summer school or last-minute tuition and coaching.

Over 900 children from schools across London and the South East are currently enrolled on our three core programmes that support students from the classroom into the boardroom:

- Junior Genius
- Uni Genius
- Girls in STEM

You can find out more about our work online at www.generatinggenius.org.uk and follow us on Twitter @GeneratingG.

If, after reading the booklet, you feel inspired by our work and would like to discuss ways in which you can support our students, please email tony@generatinggenius.org.uk



Why we do what we do



Early intervention: crucially, Generating Genius starts to work with young people at the start of secondary school through its Junior Genius programme. This is a nurturing programme based on intellectual and social challenges. Our students learn that poverty, race and gender are not barriers to academic success.



Sustained intervention: when they reach the sixth form, our Junior Genius students 'graduate' to the Uni Genius programme. Inspirational learning is combined with guidance on filling in UCAS forms and writing personal statements, university visits, and tutoring from STEM undergraduates and postgrads.



Applied subject knowledge: our young people achieve in their STEM studies at school, but few have insight into how their knowledge translates into career opportunities. Spending time in university and industry opens their eyes to a wealth of possibilities.



Life cycle: there is growing recognition that a place at university is just the start, not the end, of the challenges facing young people from disadvantaged backgrounds. Generating Genius alumni maintain a link with the programme, continuing to inspire the next generation of students to not only reach university, but achieve the best results.



Our approach works

1.7
↑
✓

Uni Genius students achieved an average of 1.7 grades higher relative to their predicted AS level grades than non-UG students

2/3

said they would now consider university after the course

90%

would recommend the programme

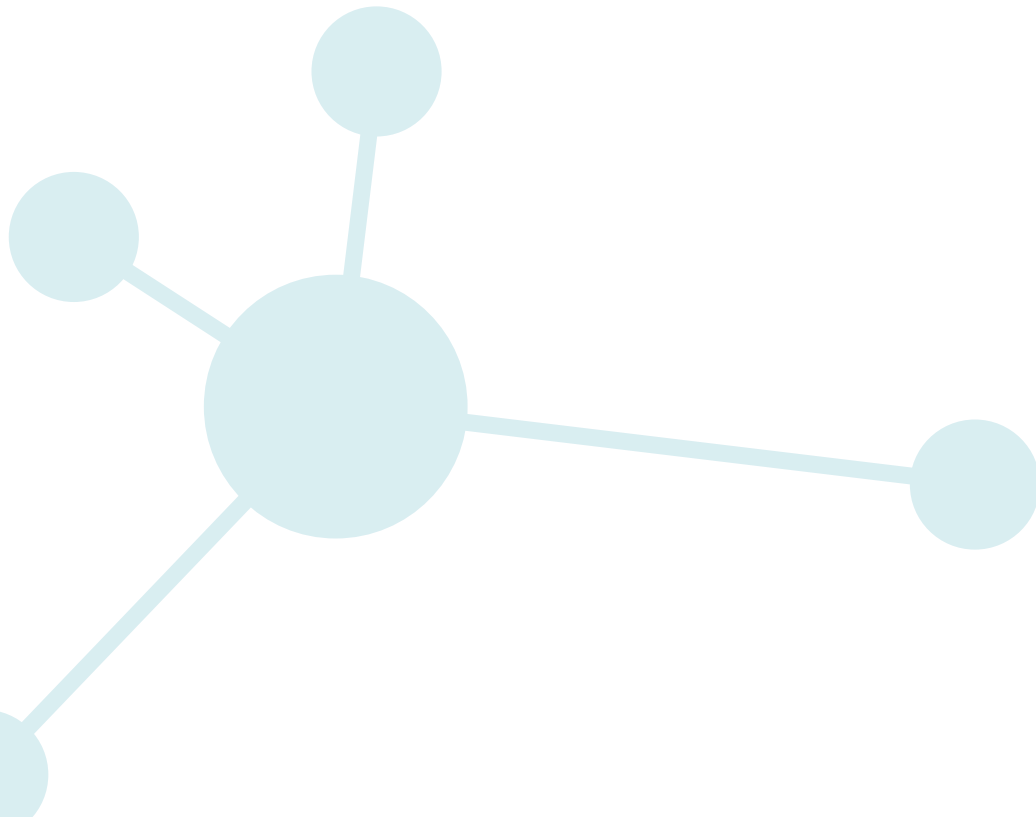


The organisations we work with

We work with a wide range of **schools, academies and sixth-form colleges** to help us select young people they think would benefit from our programmes. Key Stage 3 is the critical juncture when performance has a significant impact on whether a pupil will enter higher education. Intervention at this point helps turbocharge outcomes for young people in challenging circumstances. Additional support can take students from good to great – and increase their chances of winning a place at a top-tier university.

Universities are key partners in the work we do, breaking down barriers and showing students what life in higher education is like. Disadvantaged students need bespoke support to cope with the transition to university life, including academic mentoring and help with developing soft skills to boost confidence. We assist universities in gaining greater insight into the experience of disadvantaged undergraduates.

Fair access isn't just about getting talented people from disadvantaged backgrounds into university – it's also about making sure they get on in life after they graduate. We are fortunate to partner with leading **corporate organisations and leaders in STEM** to provide students with real experience of the world of work. Our partners in industry have a critical role in showing students what they can achieve.



Our students in their own words...

One of my science teachers recommended me for Generating Genius.

We went to Queen Mary University of London to do robotics and I went on a Royal Air Force (RAF) residential – twice. I was able to enjoy the practical elements of science more – it wasn't just something in a textbook.

I wasn't just learning science, but doing it, too.

Medicine has always been my long-term ambition. I get a lot of support from home, but no-one in my family had done any networking in medicine.

“Now I'm a medical student, I notice that so many of my fellow students have parents who are medics.”

Without the Generating Genius programme I wouldn't even have known how to apply for university. I did so many things on the programme – I had loads to put on my personal statement.

Now, I want to be a role model for Caribbean people in medicine.

Dwayne Counsell, 18





Our students in their own words...

I applied for Generating Genius in Year 8. I felt I had nothing to lose. It's one of the best decisions I've ever made.

People who are under-represented in school and in the workplace suffer from a lack of confidence deriving from lack of success. Generating Genius allows students to grow from a mindset of 'I can't be a physicist or engineer or doctor'. It allows you to be what you want.

The programme took me all over the country. I did robotics, coding, materials science, everything that's involved in STEM.

It put me in a room with people from high-profile companies. It

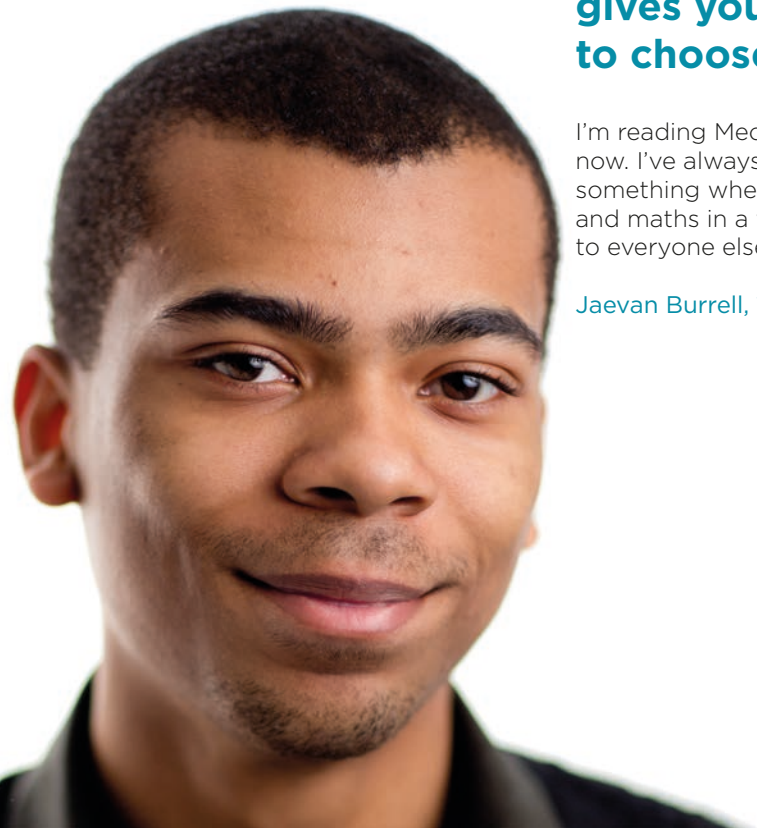
helps you to carry yourself in a way that is conducive to a professional environment.

I really saw the value in it all when I came to applying for a place at university. I understood why it should be me that got the place and not someone else.

“Generating Genius removes limiters like who your family is, what your income is, what your background is. It gives you the power to choose.”

I'm reading Mechanical Engineering now. I've always wanted to do something where I can apply sciences and maths in a way that is beneficial to everyone else.

Jaevan Burrell, 19



Our students in their own words...

One of the first things I did with Junior Genius was a forensic science workshop at Brunel University. I'd never even considered forensics as something I'd find interesting.

But it was the trip to Oxford University for a day of neuroscience that formulated the career goals I have now.

It was a real experience just being in the city. I live in East Ham. Oxford was pristine, and the complete opposite of everything I'm used to.

“It was so inspiring. It suddenly felt possible for me to be in the position of going to university, because I was physically there - in Oxford.”

Now I'm planning to go to Oxford or Cambridge to study biomedicine, and I know I want to specialise in neuroscience.

Apart from helping me to find out what I want to do, Generating Genius has increased my confidence. It allowed me to know that I'm not the only person in the world like me who wants to achieve.

Being part of the programme has allowed me to say I am achieving and that it's OK to say I'm doing well. It doesn't make me arrogant to say I'm really going somewhere!

Racharne Edmondson, 16





Our students in their own words...

I had been identified as Gifted and Talented and applied to Generating Genius in Year 7, when I was 11.

Along with 10 other boys, all from an African-Caribbean background, I went to the University of the West Indies for four weeks over our school summer holidays to study biochemistry.

Tony was asking, if there were African-Caribbean boys who are doing well, why aren't they in the professions? We were role models for the next generation.

We all felt important on the Generating Genius programme. We met MPs and when I was 13 I did a

presentation at Imperial [College London] as part of a research project we did there on different ways to combat malaria. We looked at entomopathogenic fungi as a potential cure.

“When I look back at that now I feel ‘Wow!’. We were only 13 and presenting in front of famous academics.”

I graduated in financial economics from Kent University two years ago. Now I work in financial services in Canary Wharf. I'm a project analyst working on risk-related projects. I really enjoy numbers.

Jamal Miller, 23



Our students in their own words...

“Eventually, I'd like to do a job where I can educate the public and kids on the range of jobs science can lead to.”

I got involved with Generating Genius after hearing about it at assembly. As well as all the opportunities, I really liked the idea of getting regular tuition from people already at university.

I got five As and seven A*s at GCSE. I'd just started A-levels and Generating Genius seemed like a great way to give myself a head start. I got 99% at C1 [Maths] and I wanted to follow suit in my other subjects – Biology and Chemistry.

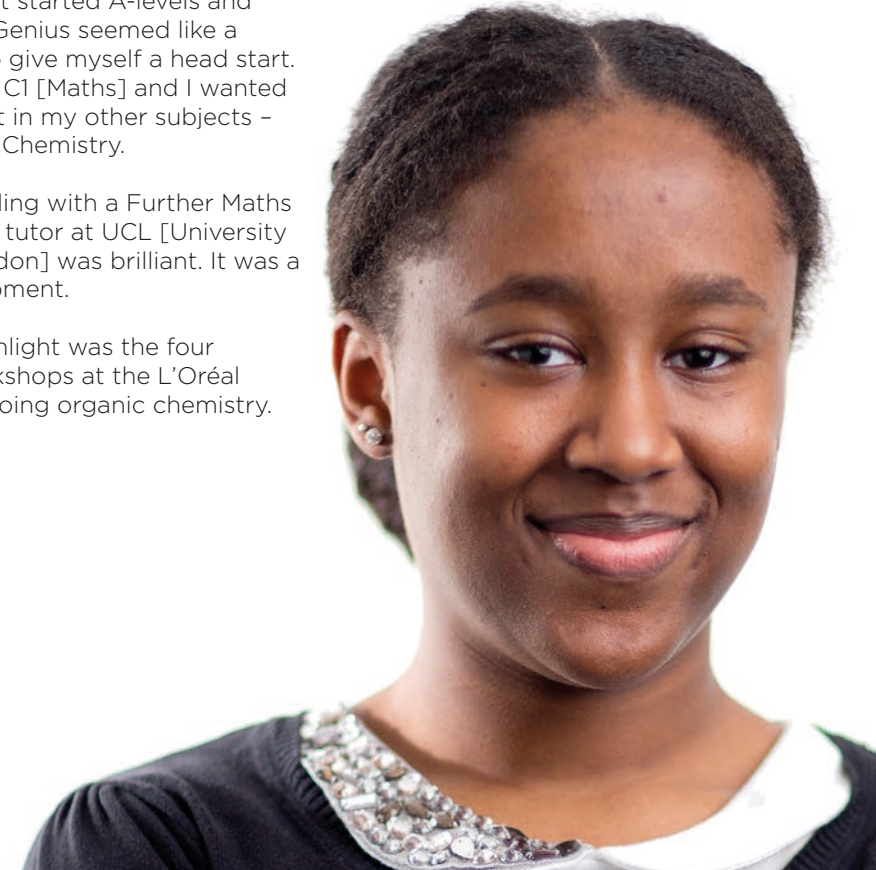
I was struggling with a Further Maths module. The tutor at UCL [University College London] was brilliant. It was a lightbulb moment.

Another highlight was the four days of workshops at the L'Oréal laboratory doing organic chemistry.

We got to make our own shampoo and devised a test to see whether I had a particular gene to taste a certain chemical. And people from the company talked about their careers from GCSE to where they are now. It gave me insight into what I could do with science subjects and how exams translate into jobs.

Now I've got five university offers, including UCL and an unconditional one from Queen Mary University of London.

Donandra Holness, 17





Our students in their own words...

I was given a Generating Genius application form from the head of Year 7 at a parents evening. I had to write an essay on 'Why are you interested in science?'

For four weeks of our summer holiday, ten of us were paired up with Jamaican guys at the University of the West Indies. It was my first time in Jamaica. It was an amazing experience. Another summer

holiday was spent at Imperial [College London] doing research on malaria. Not many 13-year-olds give presentations to professors!

“At home, there was never a push to do anything academic. The attitude was, You’ll be whatever you’ll be.”

I graduated in Biochemistry from Bristol University and now I’m a consultant in techno-economics. I advise pharmaceutical companies, helping them commercialise pharmaceuticals and medical devices.

The most important thing about Generating Genius is that you start young and the interventions are sustained. It’s especially good for young people who don’t have access to that type of guidance at home – for families who don’t have knowledge about university or the jobs market, who haven’t been to university and don’t know how it works. The programme gives you exposure to both.

Marcus Nelson, 22



Our corporate partners



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Thanks to Karen Hatch (photos).
Student interviews by Susan Delgado.

“Generating Genius had a huge impact on what I want to do in the future. I went to universities and talked to students who advised me on what GCSEs and A-levels I should take. I worked back from there - what do I have to do to go to that university.”

Generating Genius student
Sushmitha Dachepalli



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