

## Thank you to those twins who sent in their 'Then & Now' photos!

We have been busy here at TEDS collecting data for our TEDS -21 study, which we launched last summer. Many of you have already contributed to this first wave of data collection, answering questions about your education, personality, and even your online media use. A few of these statistics are shown below.

**A massive thank you for the time you have devoted to filling out these questionnaires and to those of you who very kindly donated some or all of your reward back to TEDS research.**

However, this stage of your life is so

important and so complex that we couldn't capture it all in one wave of data collection. That's why we have now launched TEDS-21 Wave 2. Here we ask questions about your wellbeing, your health and your ideas about the future. These questions are critical to understanding how young adults navigate the world during this unique life stage. The value of this information is magnified when we have data from all of you from both Wave 1 and Wave 2. It is in collecting diverse data from thousands of people that we can really begin to understand individual differences and help young people reach their

maximum potential. Every answer counts. So how can we thank you for taking part in this second wave of data collection? After popular demand, TEDS hoodies are back!

**We have designed brand new TEDS hoodies and we are giving them away for free in a series of prize draws.** All you have to do is complete TEDS-21 Wave 2 and you will automatically be entered into our prize draw. We have many of you to thank and many hoodies to give away!

**24%**

eat sweets 3-4 times per week

**35%**

have tried online dating

**48%**

have given money to charity once or twice

**61%**

use some form of social media several times a day



The new TEDS hoodies!

## Children of TEDS (CoTEDS)

Email: [coteds-project@kcl.ac.uk](mailto:coteds-project@kcl.ac.uk)

Freephone: 0800 317029



The Children of TEDS (CoTEDS) project is collecting data on the children of TEDS twins as they grow up. We are asking twins to answer many of the same questions about their children as their parents answered about them when they were younger!

We have been sending out our first questionnaire to all TEDS twins with a child older than 12 months. We've also sent CoTEDS t-shirts to welcome the new arrivals, and hope that they can remain a part of our research for many years to come...

### If you are a TEDS twin who is now a parent – we'd love to have you involved!

If you are not already part of CoTEDS, you can contact us using the details above, or fill out our online registration form to join the project: [www.goo.gl/Cr7Kxy](http://www.goo.gl/Cr7Kxy) (link also on the TEDS website).

More than 250 children have been registered to take part in CoTEDS so far.

These children live all across the UK and beyond – with some as far away as Australia and Canada. So far, 7 of the TEDS twins registered to take part have had twins of their own. We have fewer dads registered than mums. Dads – we're keen to hear from you too!

### Thank you to everyone who has registered to take part so far!



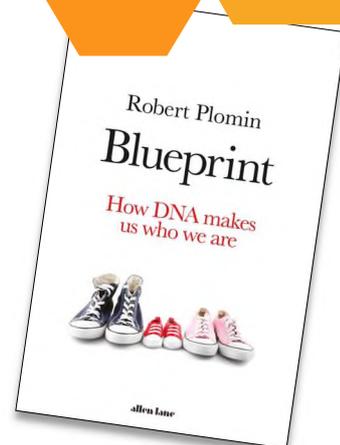
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## New book featuring TEDS research!

The TEDS Director, Robert Plomin, has an important book coming out this autumn that features TEDS research. The book is called: ***Blueprint: How DNA Makes Us Who We Are.***



The blueprint for our individuality lies in the 1% of DNA that differs between people. Our intellectual capacity, our introversion or extraversion, our vulnerability to mental illness, even whether we are a morning person – all of these aspects of our personality are profoundly shaped by our inherited DNA differences. In *Blueprint*, Robert Plomin, a pioneer in the field of behavioural genetics, draws on a lifetime's worth of research to make the case that DNA is the most important factor shaping who we are. Our families, schools and the environment around us are important, but they are not as influential as our genes. This is why, he argues, teachers and parents should to a greater extent accept children for who they are, rather than trying to mould them in certain directions. Even the environments we choose and the signal events that impact our lives, from divorce to addiction, are influenced by our genetic predispositions. Now, thanks to the DNA revolution, it is becoming possible to predict who we will become, at birth, from our DNA alone. As Plomin shows us, these developments have sweeping implications for how we think about parenting, education, and social mobility.

**When the book comes out in the Autumn, we'll be giving away a dozen signed copies as a token of our thanks for your contribution to TEDS over the years!**

WIN  
PRIZES!!

## Also in TEDS news...

Professor Robert Plomin won the prestigious 'Distinguished Scientific Contribution Award' from the American Psychological Association (APA) at an awards ceremony in Washington last year. This award is one of the highest honours for scientific achievement by psychologists.

The prize was awarded to him for 'leading the transformation of behaviour genetics from an isolated and sometimes vilified scientific outpost to a fully integrated mainstay of scientific psychology...He has been a leader of the Behaviour Genetics Association and a defender of behaviour genetics in the public domain. He is without peer in the history of American behavioural genetics.'



### Choices in young adulthood

A lot of things are changing right now in your lives. Some of you may be moving out of your family home for the first time, getting your first permanent job, starting a degree, or even starting a family! No matter what path you're taking, it's safe to say that right now is a time of much less parental input and much more freedom of choice. So how do you decide what you want to do after compulsory education? That's the question that we sought to answer and this is how we did it: we asked thousands of you what your plans were at age 18 and we also asked you to give us a sample of DNA. With those two bits of information we tested whether educational choices at age 18 were related to the millions of tiny differences in DNA of unrelated people. Well guess what, they are! Those individuals with more of the bits of DNA associated with spending a longer time in education were more likely to opt to go to university. For example, they were more likely to plan for university, seek full-time employment or start an apprenticeship. But why is this important? Well, a large body of research indicates that early adult choices relate to later adult outcomes including health, occupation and wellbeing. These results indicate that genetic differences between individuals influence the different environments that they choose. By understanding how genes and environments work together this research can inform policies that support young people in navigating the transition to adult roles. We couldn't have done it without you!



### School types and genetics



Students attending selective schools (grammar and private schools) often come out with better results at GCSE compared to those attending non-selective schools. We wanted to find out to what extent this could be explained by the selection process itself (i.e. selecting the most academically-gifted children). We found that once we accounted for selection factors, such as family socio-economic status, prior achievement and prior general ability, there were almost no average differences between students attending different school types.

We also wanted to find out what effect selection had on average differences between students' DNA. To look at this we created 'genome-wide polygenic scores'. These are scores based on someone's DNA in which you add up all of the thousands of genetic variants which have previously been associated with educational attainment. When we created these scores for everyone in the study, we found that students attending non-selective schools had lower polygenic scores, compared to those attending selective schools. However this is because selective schools are able to select their intake on factors such as ability, which have been shown to be heritable. Therefore we show that by selecting students based on certain factors, it creates average genetic differences between students attending different school types!

### My PhD with TEDS

After gaining a BSc in Psychology and MSc in Developmental Psychology from Birkbeck University, Kaili joined the TEDS team as a PhD student. The aim of her PhD research was to increase understanding of the aetiology of individual differences in educational achievement at the end of compulsory schooling and beyond. To do this, she analysed data from both TEDS and also from her native Estonia. She showed that heritability of educational achievement differs in different environments, with higher heritability noted in a more meritocratic society where selection to educational and occupational positions is more based on merit and ability than environmentally driven privilege. In addition, her PhD work indicated that genetic factors explain individual differences in school achievement, and also individual differences in subject choices. She also demonstrated that the high heritability of school achievement is explained by a range of cognitive and non-cognitive factors, such as intelligence, motivation, personality, behavioural problems.



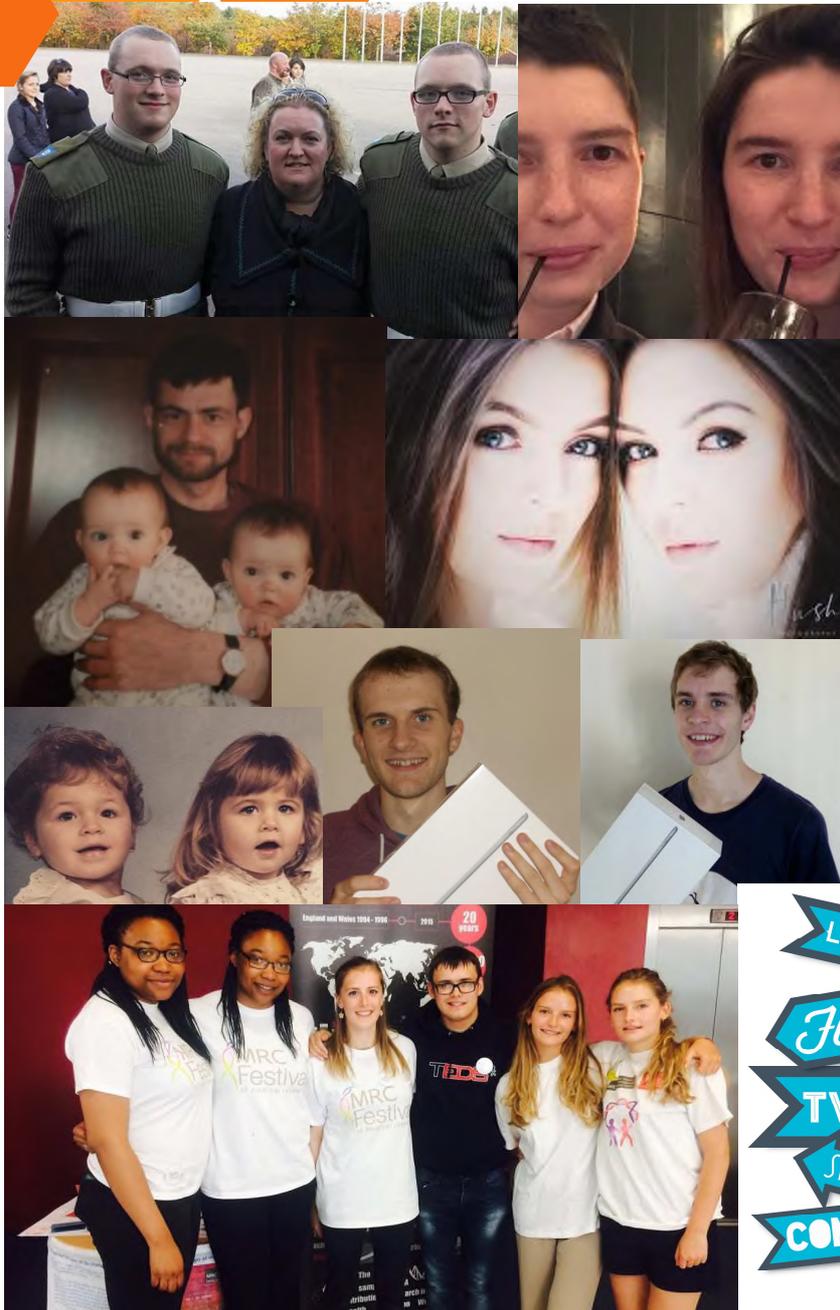
Kaili is currently working as a postdoctoral fellow at TEDS. Her research is focused on the role of gene-environment interplay in educational achievement. She is interested in early predictors of educational achievement, as well as life outcomes associated with it, such as the quality of life and health outcomes. She is currently exploring how different school experiences influence adverse life outcomes, for example depression and anxiety.

# Welcome to the newest member of the TEDS Team

Andrea joined the TEDS team in August 2017. His PhD trajectory is part of an international research collaboration aiming to disentangle the genetic and environmental underpinnings of child and adolescent mental health problems. Prior to joining TEDS, Andrea studied clinical and developmental psychopathology at Vrije University Amsterdam, where he looked at individual differences in physiological responses to stress during development. For his PhD, Andrea is interested in the gene-environment interplay of co-occurring psychiatric disorders – the way in which the environment we live in interacts with our underlying genetic predispositions to explain individual differences in the development and co-occurrence of psychopathologies. Presently he is investigating genetic predictors of co-occurring internalizing and externalizing disorders in adolescence, such as conduct disorder, depression and anxiety.



## Your twin pics!



## Social media

Jacqui: Myles and Connor, identical twins are 22 and been with #TEDSTwins since being babies



#TEDSTwins: Last week we launched our #TEDS21Wave2 study! Let us know what you think! #itsatwinthing #twinlife #TEDSFamily



@BronwenMEdw: Just completed! All looks good and the app is so easy to use...thinking back to the work books we used to fill out years ago @strangeannie

@ruthcollett: Happy Twittersary @TedsProject - thanks for making us feel special and for the iPads



@CoTEDS: Our participants are growing up so fast - we're working hard to try and keep up with them!  
@TedsProject #Twinswithtwins



Got something to say?  
Facebook/TedsProject | @TedsProject

Thank you to all our twins and their families for their ongoing support in TEDS