

# Nature beats nurture as more than 60% of a child's intelligence comes from parents

- The Mirror

New studies reveal that most of a child's intelligence is inherited from their parents - a higher proportion than previously thought.

Over 60 per cent of a child's intelligence is passed down from the parents - much more than previously believed, say scientists.

A study of 6,653 pairs of twins - one of the largest of its kind - suggests IQ really is a product of nature rather than nurture.

The research reviewed educational achievement of identical and non-identical twins - who are 50 per cent genetically similar - to enable them to identify the degree to which traits are influenced by the environment or are inherited.

It found their scores in GCSEs were 62 per cent heritable - while individual traits accounted for between 35 and 38 per cent.

Psychiatrists measured the children for 83 of these psychological characteristics which were condensed into nine broad areas including **IQ, self-efficacy, personality, well-being and behavioural problems.**

Overall they accounted for three-quarters of the heritability of the results suggesting the heritability of educational achievement is based on the inheritance of many different traits - not intelligence alone.

Educational achievement is generally considered to be the result of influences such as classroom environment and parental involvement.

But last year the biggest ever study of genetic intelligence involving 18,000 children from the UK and three other countries by Queensland University found 40 per cent was owed to parental DNA. A previous study had suggested 50 per cent.

The latest findings suggested this is an under-estimate after King's College London researchers looked at GCSE results of their 16-year-old participants in subjects including, maths, English and the sciences.

Both types of twins were assumed to have been exposed to identical environments - including home and school, reports Proceedings of the National Academy of Sciences.

Professor Robert Plomin said: "Because educational achievement at the end of compulsory schooling represents a major tipping point in life, understanding its causes and correlates is important for individual children, their families and society.

"The main finding is although intelligence accounts for more of the heritability of GCSE than any other single domain, the other domains collectively account for about as much GCSE heritability as intelligence.



“Together with intelligence these domains account for 75 per cent of the heritability of GCSE. We conclude the high heritability of educational achievement reflects many genetically influenced traits - not just intelligence.”

They said the results also support the trend in education towards personalised learning and it is to be hoped better policy decisions can be made with knowledge of genetic influence rather than assuming differences are environmental.

Equality of school opportunities will not get rid of genetic differences between children and it's important to realise some enjoy learning more than others because of their DNA.

Prof Plomin said: “Genetic thinking counters the deplorable tendency to blame teachers and parents rather than recognising learning is inherently more difficult for some children and differences in children's educational achievement are more a matter of genes than schools or home environments.

“This trend toward personalised learning has become more practical with rapid advances in technology and educational software to supplement or supplant one-size-fits-all traditional systems of education.”

A study showing over three fifths of a child's intelligence is passed down from the parents support the idea a “more personalised approach to learning may be more successful”, said scientists.

The study of 6,653 pairs of twins - one of the largest of its kind - suggests IQ really is a product of nature rather than nurture.

Eva Krapohl, of the Institute of Psychiatry, Psychology & Neuroscience at King's College London, said: “Previous work has already established educational achievement is heritable. In this study we wanted to find out why that is.

“What our study shows is the heritability of educational achievement is much more than just intelligence - it's the combination of many traits which are all heritable to different extents.

“It's important to point out heritability does not mean that anything is set in stone. It simply means children differ in how easy and enjoyable they find learning and that much of these differences are influenced by genetics.”

The researchers found the heritability of GCSE scores was 62%. Individual traits were between 35% and 58% heritable - with intelligence being the most highly heritable.

Kaili Rimfeld, also from the IoPPN at King's, said: “No policy implications necessarily follow from finding that genetics differences influence educational achievement, because policy depends on values and **knowledge**” “However our findings support the idea that a more personalised approach to learning may be more successful than a one size fits all approach.

“Finding educational achievement is heritable certainly does not mean that teachers, parents or schools aren't important.

“Education is more than what happens to a child passively; children are active participants in selecting, modifying and creating their experiences - much of which is linked to their genetic propensities, known in genetics as genotype-environment correlation.”