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There's no such thing as a gifted child: Great minds and how to grow them

A story appearing in *The Guardian* under the catchy headline “Why there's no such thing as a gifted child” has highlighted the research of Professor Deborah Eyre — former head of the UK government's National Academy for Gifted and Talented Youth — who believes that all children could potentially be “higher ability” students. Her theory of “high performance learning” states that most students, not just the “gifted” few, are capable of achieving high levels of academic success given the right learning framework.

Earlier this year Professor Eyre told the *Times Education Supplement (TES)* that when she began her tenure at the National Academy she believed, as did many others in the education field, that schools should test for giftedness and support these students to excel. However, she no longer believes this is true. Identifying students based on a single test (that is, an IQ test), says Eyre, ignores the failure of IQ to predict success in adult life and overlooks children who are talented in one area rather than across the board.

Eyre also believes that using IQ tests to identify gifted students produces socially unequal outcomes as children from disadvantaged families are under-represented in gifted and talented programs. This issue has recently been featured in the Australian media with the revelation that less than 3% of students at selective high schools in New South Wales are drawn from the 25% of families in the lowest SES (socioeconomic status) band.

Professor Eyre now believes that almost all students are capable of achieving at the highest level and that the way to do this is to “create a system that expects significantly more from more pupils”. Opportunities that are currently only provided to gifted students — and the high expectations that come with them — she says, should be applied to benefit all students.

Journalist Wendy Berliner, who has co-written a new book with Professor Eyre, *Great Minds and How to Grow Them*, explains in *The Guardian* that IQ testing is not a good predictor of success in adult life. In fact, most Nobel laureates were “unexceptional in childhood”. Albert Einstein failed the general entry test for Zurich Polytechnic and only gained entry due to his high physics and mathematics scores. More recently, Maryam Mirzakhani, the only woman to win the Fields Medal (the mathematics equivalent of a Nobel prize), did “rather poorly” in mathematics in middle school. It was not until her older brother showed her a famous problem from a magazine that she became “hooked” on mathematics.

Berliner and Eyre argue that what distinguishes exceptional people is their curiosity and persistence. Einstein failed to get an academic post and was passed over for promotion at the Swiss Patent Office, but never gave up working on his theory of relativity. Mirzakhani — who tragically passed away from breast cancer in July aged just 40 — also persisted, saying that the “most rewarding part is the ‘Aha’ moment” of a new discovery, but that “most of the time” doing mathematics is “like being on a long hike with no trail and no end in sight”.

These examples are backed up by multiple studies conducted over the past century, including an American study commenced in 1921 of 1,470 high-IQ Californians which found that none of them excelled in later life — well, except for the two future Nobel prize-winning physicists dismissed from the study because their IQ scores were not high enough.

Research summary for principals

It is not “unique and innate talents” that are at the heart of high performance, writes Berliner. Rather, an influential American study shows that it is about 10,000 hours of “deliberate practice” that “stretches you every step of the way” that “produces the expert”. Parents also play an important role, with another study showing that outstanding adults — in fields as varied as swimming, ballet, neurology and mathematics — not only worked long and hard in their chosen field, but that their parents also demonstrated a strong work ethic.

Berliner writes that current research shows that high performance “goes way beyond tested intelligence”. The brain has been found to be highly malleable and capable of forming new neural pathways in response to new experiences. In other words, IQ is not fixed.

These results are supported by research on brain plasticity and gender by Professor Cordelia Fine of Melbourne University, and ground-breaking research by Emeritus Professor James Flynn of Otago University showing that IQ scores increased substantially throughout the 1900s. As reported in *The Age* newspaper, Flynn believes that improved access to formal schooling has given people the “scientific spectacles” needed to solve the kinds of problems included in IQ tests. The ‘Flynn Effect’ of increasing IQ, he says, suggests that intelligence is flexible and can, “like a muscle, be strengthened with exercise”.

In sum, writes Berliner, “the latest neuroscience and psychological research suggests most people, unless they are cognitively impaired, can reach standards of performance associated in school with the gifted and talented”. What is crucial, however, is that “they must be taught the right attitudes and approaches to their learning and develop the attributes of high performers”, including curiosity, persistence and hard work. Also critical, says Berliner, is that students receive support at home, not just at school.

Professor Eyre’s research shows that successful learners possess a set of “cognitive competencies” that she believes all students should develop, including perseverance and resilience; an open mind; and the ability to think logically and critically, solve complex problems, and work collaboratively. As Albert Einstein once wrote:

It’s not that I’m so smart, it’s just that I stay with problems longer. Most people say that it is the intellect which makes a great scientist. They are wrong: it is character.

Reference

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