

**ADVANCED GCE
CRITICAL THINKING**

Unit 4: Critical Reasoning

RESOURCE BOOKLET

TUESDAY 10 JUNE 2008

F494/RB



INSTRUCTIONS TO CANDIDATES

- You should spend about 10 minutes reading the article “The sky's the limit” and use it to answer Section B.

This document consists of **3** printed pages and **1** blank page.

The sky's the limit

The common understanding of genius goes something like this: you're either born with it or you're not. Furthermore, those who are born with it display it early on and deserve special treatment to ensure that they reach their full potential.

1

This picture of genius as a gift is so entrenched that it has come to define the way we educate children. Despite the efforts of reformers, there is still an overwhelming tendency across the world to give the brightest students the best opportunities, because these are the ones who will go on to be the entrepreneurs, political leaders and captains of business and industry, and contribute most to the development of their communities or countries. Or so the thinking goes.

2

Trouble is, the thinking is wrong – profoundly so, if we are to believe a growing body of evidence from psychology and the cognitive sciences. It suggests that brilliance in academia, sport, music and many other fields is due only in very small part to innate ability. Mostly it comes through inspirational instruction, a supportive environment and sheer hard work. “It isn’t magic and it isn’t born,” is how one leading researcher puts it.

3

One reason the old model of genius has started to fall apart is the realisation that whatever the discipline, there is no guarantee that a brilliant child will make a brilliant adult. A study of graduates from New York City’s elite Hunter College Elementary School, whose pupils have in common an IQ of at least 130, found that while most now lead happy, fulfilled lives, they have not achieved the heights in professional life that their teachers might have predicted. Brilliance in childhood essentially means being a brilliant learner; in adulthood it is about being able to apply knowledge to new situations in creative ways – two very different things. It’s similar in sport: the most gifted child runners usually do not go on to be Olympic champions.

4

At the same time, history is full of child prodigies who did achieve greatness as adults, but what is rarely mentioned is the support, instruction and huge amount of work involved. Roger Federer said after winning the US open tennis championship that in his youth he could have sat back in the knowledge that people thought him talented, but “I chose the hard-working road and it paid off.” John Sloboda, a psychologist at Keele University, has demonstrated a strong correlation between expertise in music and the amount of time spent practising. The notion that people love doing things because they’re good at them is back to front – they’re good at them because they love doing them and will spend hours practising.

5

All this has far-reaching implications for how we educate our children. When it comes to creating an environment in which they can fulfil their potential, it now seems that we’re getting it wrong. For a start, if the aim is to nurture successful adults, creating elite schools for highly intelligent pupils, or elite classes that receive the lion’s share of a school’s resources and the best teaching, is a waste of resources because it doesn’t work. More importantly it gives the wrong message to those children who are not selected, at a crucial stage in their development. It tells them that, however hard they try, they will never break the mould their genes have cast for them. Unless these children are highly motivated and confident, the chances are that they will carry this message with them forever.

6

More surprisingly, this form of streaming can be disruptive for brilliant children as well, because it makes it harder for them to deal with failure. Carol Dweck, a psychologist at Stanford University in California who has spent a lifetime studying motivation in children, has found that telling students they are one of the elite discourages them from trying things that may challenge them and potentially make them look less smart. They tend to develop an inflexible mindset and stick to things they know they’ll succeed at, she says.

7

The myth about genius being innate is bound to persist, because the reality is much more banal. The road to glory is paved not so much with talent as with blood, sweat and tears. This may not sound as glamorous, but it is a lot more exciting, for it means that, given the right environment, we can all come closer to greatness.

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From *You could be a genius too*, New Scientist, 16 September 2006

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