



General Certificate of Education
Advanced Subsidiary Examination
June 2011

Critical Thinking

CRIT2

Unit 2 Information, Inference and Explanation

Source Material

This source material is to be read in conjunction with the questions in unit CRIT2

Document A



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Our world is changing... fast

1. Do you have an iPhone or iPad? A Blackberry? A handset by Samsung, Huawei or ZTE? They are made in the USA, made in the USA, made in Korea, made in China and made in China, respectively. "All the software innovation is being done on the west coast of the US, and all the manufacturing and technical innovation is being done in the Far East. All we're doing is selling other people's products," says a senior European business executive. This example poses a serious question: How will Britain do in the international competition for jobs and wealth compared to the US, China, South Korea and India?
2. By 2020 there will be 5 million fewer low skilled jobs in Britain than there are today and over 40% of all jobs in 2020 will require a graduate level qualification. In fact, it is predicted that the top ten in-demand jobs for 2015 may not even have existed in 2010, so teachers are preparing today's students for jobs that do not even exist yet. These changes are being led by technology.
3. For example, China's high-tech exports grew from \$10bn in 1996 to \$200bn in 2006. The plan now is to move from 'Made in China' to a 'Designed in China' economy. Therefore China will quadruple the number of postgraduate students it had in 2001 by 2020. So, not only will these countries continue to provide low cost unskilled workers to make goods, they will increasingly compete with us for highly skilled work too, reducing its availability for British workers.

Source: paragraphs 2 & 3 adapted from Department for Children Schools and Families, 'The world is changing - a new look at Britain in a changing world (short film)'
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Document B

- The Organisation for Economic Co-operation and Development (OECD) comprises many of the world's most highly developed countries. It has produced an indicator of "investment in knowledge" (see table).
- Many economists believe that we should increase investment in knowledge to keep highly paid jobs in Britain and maintain our standard of living.

Table 1: Investment in knowledge across the OECD

High Investment Economies	1994	2002	% point change
Sweden	5.1%	6.8%	+1.7
United States	5.4%	6.6%	+1.2
Finland	4.7%	6.1%	+1.4
South Korea	4.9%	5.9%	+1.0
Denmark	3.7%	5.5%	+1.8
Japan	3.9%	5.0%	+1.1
Canada	4.5%	4.7%	+0.2

Middle Investment Economies			
Australia	3.9%	4.1%	+0.2
Germany	3.4%	3.9%	+0.5
Belgium	3.6%	3.8%	+0.2
Netherlands	3.4%	3.8%	+0.4
France	3.4%	3.7%	+0.3
UK	3.5%	3.7%	+0.2
Austria	2.3%	3.4%	+1.1

Low Investment Economies			
Spain	2.1%	2.8%	+0.7
New Zealand	—	2.8%	—
Ireland	2.6%	2.4%	-0.2
Italy	2.0%	2.4%	+0.4
Greece	1.1%	1.9%	+0.8
Portugal	1.3%	1.8%	+0.5

Notes: The table shows percentages of Gross Domestic Product (GDP) spent on investment in:

- Research & Development of new products and technology
- Higher Education (i.e. university education and research)
- IT software

GDP is a measure of the total wealth generated in a country.

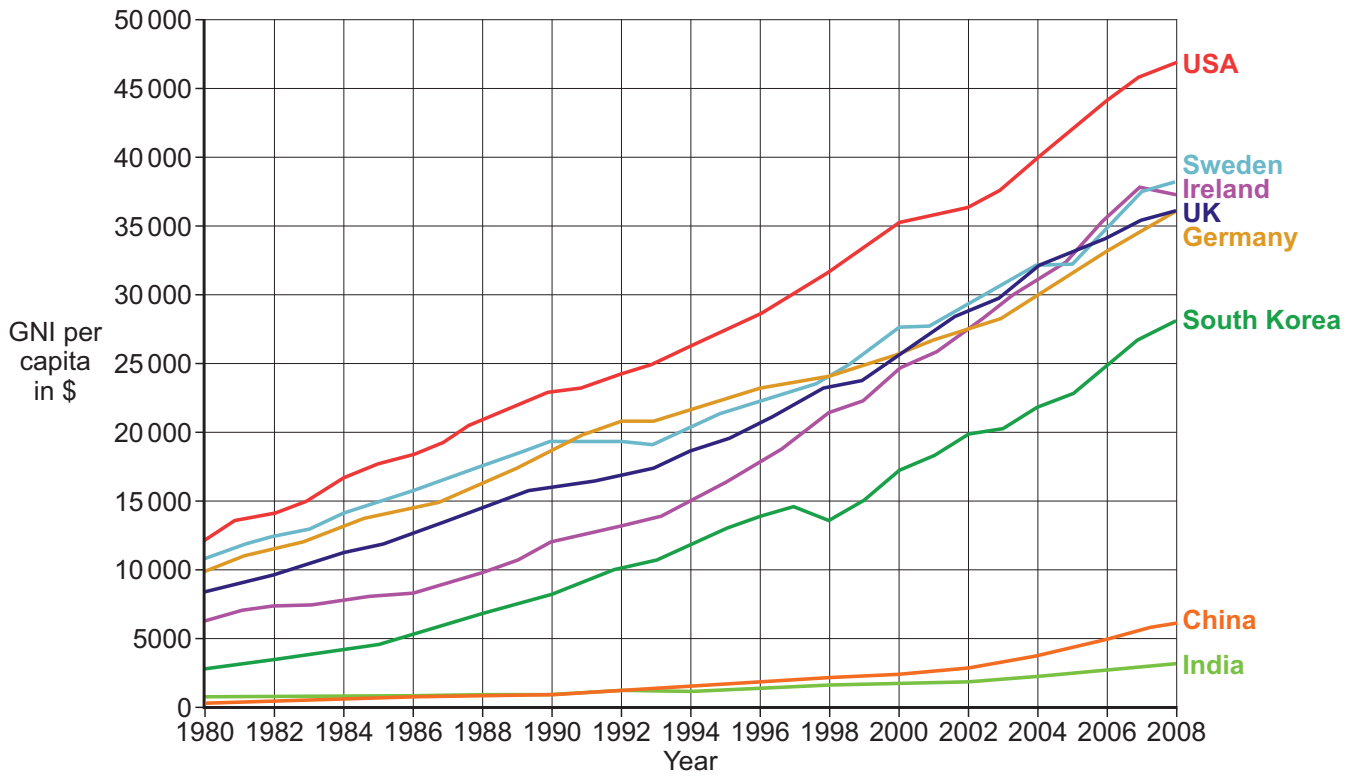
Figures for Belgium are from 1999 (not 1994); Korea 1995 (not 1994); Greece and Italy, 2001 (not 2002).

Source: adapted from OECD (2006) OECD factbook 2006: Economic, Environmental and Social Statistics, www.sourceoecd.org/factbook

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Figure 1: Gross National Income per capita



Note: GNI per capita is a country's income in a year divided by its population. It is given in dollars, adjusted to take account of price differences in the countries so that each dollar buys the same goods.

Source: adapted from World Bank.<http://dataworldbank.org/>

Document C

Lazy Britain Trails Toiling Asian Tigers

1. Asian students are doing far better in school than those of other ethnic groups, according to a ten year study of 20 000 students by Laurence Steinberg. The superior performance of the Asian students is stark. Even when students from identical social backgrounds were compared, the Asian students were outperforming their classmates attending the very same schools. This occurred even in poor quality inner-city schools. Why?
2. The reason that Asian students perform better is that they work harder, try harder and are more interested in achievement. It has nothing to do with superior intelligence. As Steinberg points out: "If Asian students were truly genetically superior to other students, they would not be spending twice as much time on homework each week as their peers, in order to outperform them."
3. Furthermore, Asian students have a greater fear of the consequences of failure, and this provides a strong motivation to work hard at school. Asian communities tend to view success as a product of hard work and failure as a result of insufficient effort. Crucially, Steinberg notes that the longer Asians live in the West, the more their performance returns to average levels.
4. Just as non-Asian British students are falling behind their Asian classmates, so the UK is struggling to compete with countries such as China, India and South Korea for the best jobs. In a world economy driven by high skill, high technology manufacturing, Britain is shirking real toil. The evidence for this comes from British employers.
5. In a survey by the British Chambers of Commerce bosses of more than 300 small and medium-sized businesses were asked: "What reasons do you have for employing migrant workers?"
6. They said that migrant workers from anywhere from Poland to India have "a better work ethic" and are "more productive". British workers also lack the "required skills" and there is a short supply of local "candidates with required experience."
7. A Home Office report from 2007 draws the same conclusion: New arrivals are harder-working than typical British employees.
8. The answer then, is clear. To maintain Britain's position as a leading world economy we need to change Britain's culture of laziness. The key to a successful future is not dreaming of celebrity or lottery wins but to develop vital skills through hard graft.

Sources: adapted from TONY MOONEY 'Ethnic work ethic, *The Independent*, 28 November 1996
www.independent.co.uk/news/education/education-news/ethnic-work-ethnic-1354553.html

NIGEL MORRIS 'Home Office: migrants work harder, earn more and pay more tax than Britons'
The Independent, 17 October 2007
www.independent.co.uk/news/uk/politics/home-office-migrants-work-harder-earn-more-and-pay-more-tax-than-britons-397055.html

BECKY BARROW, 'Bosses choosing committed foreign workers over lazy British'
The Daily Mail 12 February 2007
www.dailymail.co.uk/news/article-435757-bosses-choosing-committed-foreign-workers-over-lazy-British-says-CBI-html

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Document C continued

Table 2: Achievements at GCSE for pupils at the end of Key Stage 4, by ethnicity

Year: 2008 (Provisional)

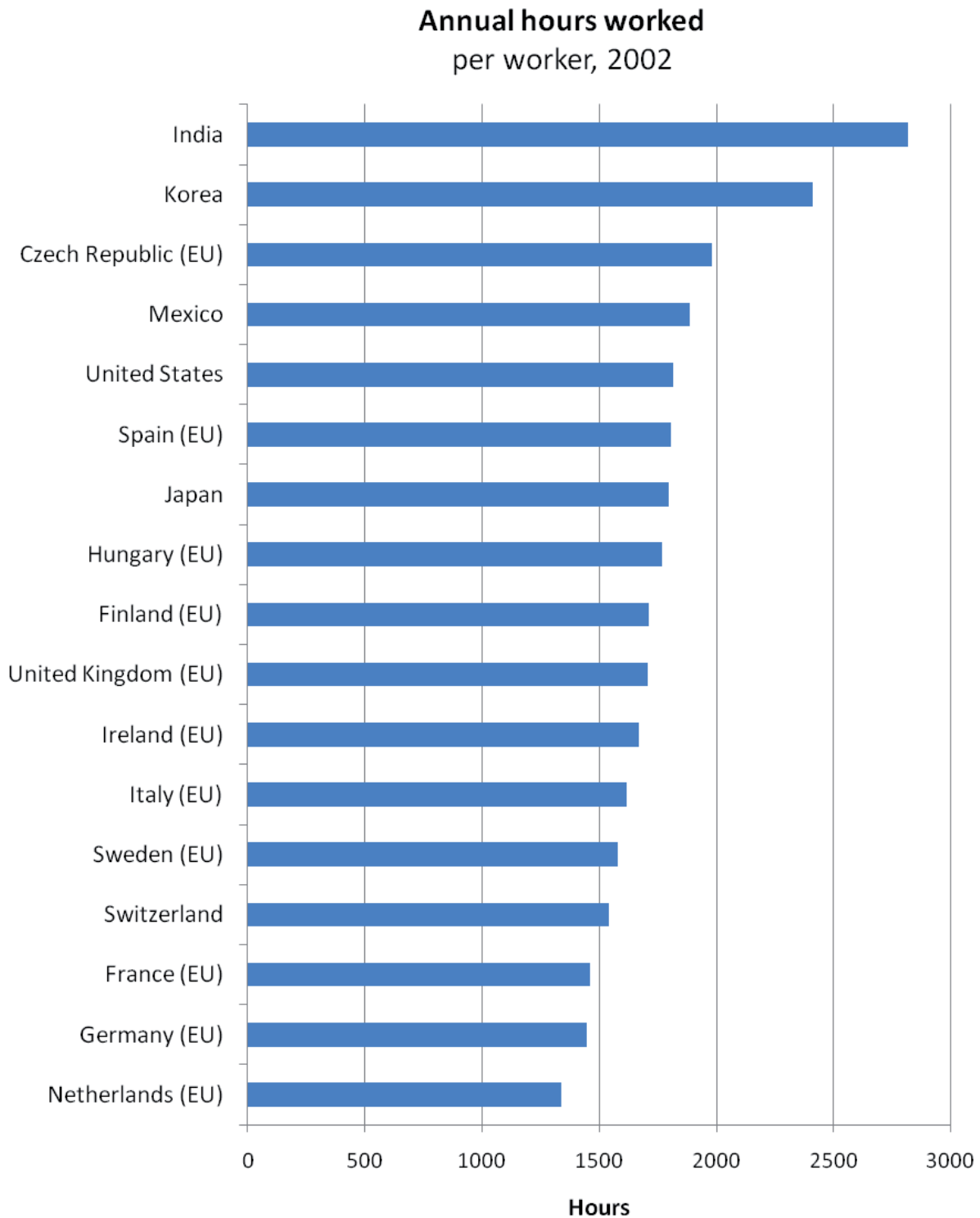
Coverage: England

Ethnicity	Eligible pupils	Total	
		% achieving	
		5 A* to C inc. English & Maths	Any Passes
White British	484,470	48.0	98.2
Irish	2,122	56.6	97.7
Traveller of Irish Heritage	109	7.3	71.6
Gypsy/Romany	440	6.8	84.8
Any other White background	15,094	45.7	97.4
All White	502,235	47.9	98.2
White and Black Caribbean	6,040	37.8	97.6
White and Black African	1,583	46.4	97.2
White and Asian	3,094	58.2	98.4
Any other mixed background	5,487	50.6	97.8
All Mixed	16,204	46.9	97.8
Indian	13,443	64.9	99.2
Pakistani	15,173	39.7	98.5
Bangladeshi	5,800	44.5	98.6
Any other Asian background	5,627	52.1	97.7
All Asian	40,043	50.6	98.6
Black Caribbean	7,941	35.9	98.1
Black African	11,953	43.3	98.3
Any other Black background	2,670	39.0	97.3
All Black	22,564	40.2	98.1
All Chinese	2,229	69.5	98.8
All other ethnic groups	5,607	44.3	97.0
All Pupils	598,930	47.8	98.2

Source: Department for Children, Schools and Families.
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www.dcsf.gov.uk/rsgateway/DB/SFR/s000822/index.shtml

Document C continued

Figure 2: Annual hours worked



Notes: This chart shows the total hours worked in an economy in one year divided by the number of employed people.

Countries marked "(EU)" are members of the European Union. Switzerland is European by geography but it is not an EU member state.

Source: OECD (2004) OECD in figures 2004: Statistics on Member Countries, P.84
www.oecd.org/infigures

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Document D

Technology has long promised a utopia in which robots do all the work while we give ourselves up to reading philosophy, drinking fine wines and having sex. Well, things didn't quite work out that way. Machines became instruments of enslavement and prolonged boredom. The twentieth century saw more and more new technology, invented faster and faster and we are now working longer hours than medieval peasants. Put simply, human beings are employed at low rates of pay to operate machines in order to make profits for the owners of the company. Added to that, the high cost of big machines demands that they be used as intensively as possible, and that means long hours and shift work.

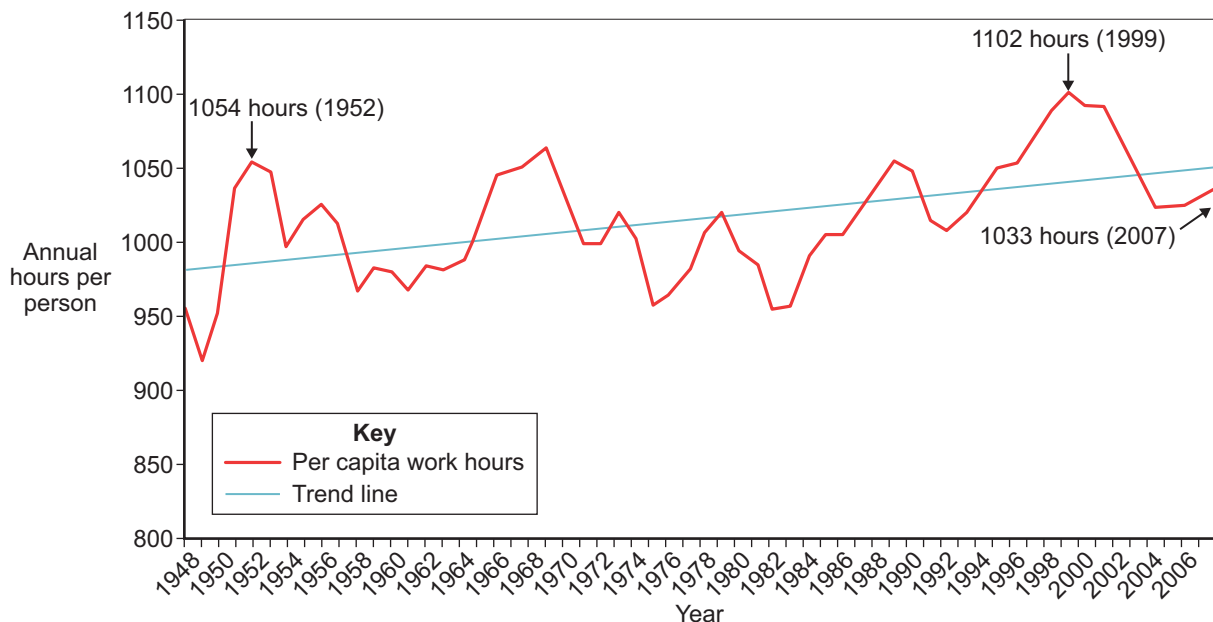
In the workplace, machines make us look bad. They don't call in sick, they don't ask for a pay rise, they don't go on strike, they don't stop for tea or lunch, they don't get depressed, they don't split up with their boyfriends, they don't cry in the loos, they don't even sleep. So it is that the employer does all he can to make people more like machines. The accusation 'unprofessional' means 'You did not behave like a machine today'. Goodbye creativity, imagination, life.

Machines now even enter our personal lives. Take that unspeakably awful new gadget the Blackberry. Quite apart from its terrible crime of exploiting the name of a delicious fruit to make profits, the Blackberry is also to be feared because it allows slave labour to further invade our everyday lives. You can take it to the beach and work there. You can work in the pub. The boss can ask for a report when you're three pints down, thus completely ruining your evening. What is truly amazing is that we buy these electronic tagging devices, these electronic manacles, at our own expense.

So, cast off your manacles, submit no more to the machine – stop working and start living!

Source: Text adapted from TOM HODGKINSON (2006), *How To Be Free*, Hamish Hamilton, 2006.
Figure 3, adapted from www.epi.org/

Figure 3: Per capita work hours, 1948-2007, UK



Note: Based on total work hours and total UK population (16 and older).

END OF SOURCES

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