- Students could use the TDCS apparatus in **preparation** for exams
- Neuroenhancement could be argued to be **not new** students "neuroenhancer" themselves when they use caffeine-based drinks to block adenosine receptors in the brain, making it more alert to revise

Improve Marketing Techniques

- Recent application of neuroscience is been in the world of advertisings and marketing - "neuromarketing"
- When interviewed by market researchers we may not give our true opinions as we want to appear in a "good light" – SDB can be avoided using eye tracking watching ads

 EEG can be used to analyse neurological response.
- EEG can be used to analyse neurological respons
- Sands Research used this kind of peuroma Reting research when teviling the highly successful as "The Forde" (Vakswagen)
- Doug Van Praet, notes that upped traffic to the Volumensite by half, and contribute of the hogely successful sales by the brand"

available to all

Therefore, we maybe should **consider banning** the use of neuro-enhancing technologies in the same way as performance-enhancing substance are banned in sport

Improve Marketing Techniques

- Accessing information about consumer preferences and behaviours is not idviduals have helped make product marketing more effective new loyalty cards and analysing the online browsing records of
 - However, neuromarketing has access to our inner thoughts
 - Wilson (2008): believe that commercial integration of neuromarketing research allows the advertiser to deliver individualised messages where our free will is potentially manipulated by big brands
 - Currently, neuromarketing is not obliged to follow the ethical codes of practice
 - In fact, Nelson (2008) found that 5% of the brain scans recorded by marketing firms produced "incidental findings" – e.g. researchers may see evidence of a tumour, as they are not "board certified", they are not obliged to follow appropriate ethical codes, such as advising the person of their findings

Ethical Implications

- Society us already using mood-altering drugs, both in the form of prescription medicines such as **anti-depressants** and **illicit substance** such as MDMA – can sketch brains electrochemical functions
- Studies using **fMRI** have revealed that particular areas of the brain associated with particular cognitive events, such as our moral emotions and ethical reasoning
- "love drugs" can help maintain intimate relationships – can use substances to predispose us towards feeling, judgements and behaviours that make us more social
- If criminal tendencies are detected earlier this can prevent later tendencies
- Early detection of psychopathic tendencies

Social Implications

- Research by **Raine** demonstrates the effect that early intervention could have if the prevention of crime
- Shoppers may find they are subject to marketing strategies that are more personalised and culturally targeted, further reducing customers effect and time in making choices

Economical Implication

- Improving marketing techniques can **aid** the economy by stimulating sales and profits
- For example, Nuffield Trust (2014) points out that since the financial crisis started in 2008 there has been an increase in the number of antidepressants being prescribed
- The Trust noted a greater rise in antidepressant usage amongst areas of the population with higher rates of unemployment
- Thomas and Morris (2003) estimated the total costs of depression in adults in England alone was £9.1 billion in 2000
- In England alone the UK economy treated dementia is £23 billion per year neuroscientist can help treat or cure these