Complementary medicine courses in universities: how I beat the varsity quacks

The teaching of complementary medicine has no place in British universities, says David Colquhoun.

Magic: alternative medicine techniques are being taught in accredited colleges, much to the dismay of doctors and scientists

By David Colquhoun

8:14AM GMT 31 Jan 2012

What would you think if your child went off to university to be taught that amethyst crystals "emit high yin energy"? Or that cancer can be cured by squirting coffee up the fundament? What if they were told in a lecture that the heart is not, as medical science has believed for centuries, a pump for circulating blood around the body but instead "the governor of our rational thought and behaviour"? Well, you'd probably want your tuition fees back for a start.

For more than a decade, "facts" such as these have been peddled by more than a dozen fully accredited, state-funded British universities: the above examples come from the University of Westminster and Edinburgh Napier University. Indeed, since the mid-1990s, such ideas have been presented and taught as if they were real medicine.

The teaching of "complementary" (that is, non-evidence-based) medicine is something about which

scientists and rationalist campaign groups have been raising havoc for years. It may seem harmless and even a welcome alternative to traditional perspectives. But teaching people that homoeopathy is evidence-based when it isn't, and encouraging students to distrust the scientific method, not only runs counter to reason, but can be dangerous.

"Complementary" medics can cause harm by persuading patients to shun medicines that can cure or alleviate their condition. In extreme cases – such as the prescription of herbal remedies for potentially fatal diseases such as Aids – it can kill. Steve Jobs, for example, might still be alive if he had not initially decided to treat his pancreatic cancer via diet, rather than radiotherapy.

As a senior scientist in one of Britain's biggest and most respected universities, I was bemused when I first learnt of the existence of these bizarre courses. After all, we are beset by a plethora of regulatory agencies that are meant to put a stop to worthless degrees. Moreover, these bodies are supposed to guarantee that students are paying for accredited academic courses, not ones that professional scientists would dismiss as teaching "magic''.

The sad fact is that none of these regulators did anything to stop the infiltration of the mainstream. The Quality Assurance Agency has ticked its boxes and rubber-stamped these dubious courses. The Medicines and Healthcare Regulatory Authority has allowed the misleading labelling of quack medicines. Trading Standards has been useless. The Department of Health has vacillated, and will not allow Nice (the National Institute for Clinical Excellence) to investigate, despite many requests to do so. Parliament has been unhelpful (perhaps not surprising, when one MP, David Tredinnick, got into trouble for buying astrology software on expenses).

The only organisation that has done anything sensible is the Advertising Standards Authority (ASA), which has said – for example – that advertisements placed by homeopaths cannot name particular diseases that they purport to treat. The ASA also reprimanded Boots for misleading claims on its homoeopathic "remedies".

The true villains of the piece, however, are the vice-chancellors, who must take responsibility for what is taught at their university. In 2008, I wrote to the then vice-chancellor of the University of Wales, Marc Clement. I asked him, as a physicist, what his opinion was of this statement: "Implosion researchers have found that if water is put through a spiral, its field changes, and it then appears to have a potent, restorative effect on cells."

This was written by the course leader for an MSc in "Nutrition" run by the Northern College of Acupuncture, but validated by the University of Wales. The validation committee did not appear to have noticed it. And Prof Clement did not reply to my request for an opinion about the wonders of "spiralised water". The consequence of this, and hundreds of other "validations" conducted by the

University of Wales, was that it was abolished, thanks to Welsh education minister Leighton Andrews. Yet action was only taken after the scandal was flagged up first by bloggers, and then in two programmes by BBC Wales. There is, surely, something very wrong when academic standards have to be maintained by online amateurs and local broadcasters.

What is encouraging, however, is that the tide appears to have turned. At the beginning of 2007, 16 universities offered 45 BSc degrees in make-believe medicine. There were even five degrees in homoeopathy (the medicine that contains no medicine). Now there are none. Likewise, degrees in naturopathy, reflexology and aromatherapy have all vanished from Britain's universities. "Nutritional therapy" has almost gone, too.

This is especially good news, since the people who deal sensibly with nutrition are called dieticians. Anyone can be a self-styled "nutritionist": the terms "nutritional therapy" or "nutritional medicine" usually refer to an individual who claims to be able to cure almost anything by diet, but whose aim is to sell you expensive and unnecessary – or even harmful – supplements. This practice was exposed in a recent investigation by Which? magazine, in which 14 out of 15 consultations were deemed "fails" and six out of 15 gave dangerous advice.

There are two obvious reasons for this welcome return to sanity. One is that the Freedom of Information Act allows anyone to find out what's being taught to students. Universities have fought tooth and nail to hide the information, but they were overruled by the Information Commissioner, who decided that taxpayers should be able to see how their money was spent. The internet has also been a factor: vice-chancellors don't like it when Googling their names produces references to "yin energy".

But a more positive explanation may be that we seem at last to be emerging from the age of what we can call the "endarkenment". People are less willing to believe things that aren't true – whether it's the presence of WMD in Iraq, the effectiveness of bankers' derivatives, or the power of homoeopathy. They are also less willing to pay for them. The huge rise in tuition fees will cost the taxpayer money (through the loan scheme), but at least it may put the last nail in the coffin of quackery. Vice-chancellors seem remarkably insensitive to the contents of what's taught, but they care a great deal about the money.

In terms of the remaining degrees, the courses that are predominantly in Chinese medicine and acupuncture. Chinese remedies are almost completely untested, and they are frequently contaminated and dangerous. They also contribute to the slaughter of rhinos, tigers and bears.

Acupuncture is more interesting. There is no doubt that it has had, in the past, greater acceptance by the medical establishment than other forms of alternative medicine. One welcome consequence is

that there has been a lot more research into this practice than others. However, almost all of it points to the conclusion that it is no more than a theatrical placebo.

If you get yourself poked with needles, and the next day you feel better, there are two possible reasons. One is that you are experiencing a placebo effect. The other is the "get better anyway" effect or, in scientific parlance, "regression to the mean". Acupuncture might sit at the respectable end of the fruitloopery spectrum, but I believe it has no place in a university, other than as a good example of how easy it is to fool yourself.

Over the past few years, bloggers and campaigners have made an enormous contribution to the resurgence of rational thinking. It is a shame that the official bodies that are supposed to protect us from the snake-oil salesmen have not done such a good job.

David Colquhoun is professor of pharmacology at University College London