



# THE TEENAGE BRAIN

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Images by: Julien Scheffer & istock

It started out predictably enough. A collection of High School parents sufficiently curious about their teenager's brain health to brave a wet and blustery night for a talk strongly recommended by teachers. John Joseph, an unlikely looking international speaker on learning and the brain, started with a graph of five student-learning types. The anxious learner who weeps when her marks are down just 1%. The high flyer who avoids working in groups because he begrudges sharing his genius with others. The competent 'I'm fine' straight C learner who refuses to be pushed to excel. The struggling learner who's convinced that he or she is a duffer even from Year 5. And the under-achieving 'I wish I wasn't here but since I am I'll take it out on everyone else' learner who has given up the fight to learn but secretly wishes he hadn't. Caricatures, of course. And yet the whole point of caricatures is that they contain a grain of truth.

All this was by way of a warm up. John Joseph then got down to the real question. Why, he asked, do your kids come to school? Is it because they feel they have to, out of a sense of duty? Is it because they're genuinely interested in and excited by learning, and want to be challenged? Is it because they want to see their friends, network, and get on in their 'I'll be fine if you leave me alone' way? Or is it because they require a certain entry score to launch them into what they perceive as adult life?

On day one of his week-long presentation to students John Joseph threw plastic sheets over tables before inviting them to dissect sheep's brains on them. Sadly at our evening session there were no brains to dissect. Instead he asked some pointy questions aimed at sussing out how well we care for our own brains. Do we eat well? Sleep well? Express the whole range of our feelings? Or do we live our lives in fifth gear, busy-busy-busy, with barely time to talk to our children - talking at them as we rush out the door, our stress levels permanently high? Do we urge them to do well academically, forever coaxing and goading, even when they show every sign of wanting us off their backs? Do we unconsciously favour intellectual careers over hands-on practical ones? And, not least, have we any idea what they're up to in their bedrooms after the lights in every other room of the house are out?

Thankfully, after causing us to shift edgily in our seats, John Joseph went back into teaching mode. Probably the most powerful concepts that he set out that wet and windy night - in a lecture theatre where students spend lesson after lesson chewing the end of their pens and absorbing more or less of what their teachers are trying to deliver - were what he called the four worlds. The four worlds which, added together, account for what is most glorious and most ghastly about 'getting an education' today.

The first world is the world of the self, the world that is uniquely me. It's the place where personality forms and, with it, with any luck, a positive outlook. It's present in every happy toddler playing absorbedly in the sandpit, and in every older person who keeps a zest for life and a light in their eyes. It's the part of ourselves that accounts for who we are - regardless of what life happens to throw at us.

The second world is that of direct experience - it's the sum of all we've done, the places we've visited, the people we've met. It's the hands-on part of ourselves that seeks to master the world through sports, the arts, crafts and possibly, later, trades. It's the 'let's get on with it' part which has neither care for abstract problems nor concern for the future. In contrast the third world covers everything that can be learned indirectly - it's the place of lecture theatres, libraries, and essays that grapple with all that's thought and known. It assumes a willingness to engage with concepts and experiences beyond ourselves - it's education's natural home. And the fourth world? It's the place of possible futures, of flights of imagination, of innovation and risk-taking.

What, you may ask, is the point of these worlds for today's teenagers? John Joseph believes that the first world of young people, on which the other worlds depend, is increasingly under threat. (30% of girls currently in High School will experience depression at some point before they leave - a massive statistic and warning).



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His message isn't just about promoting resilience and positive psychology – of positive over negative experiences, and mental habits that might help overcome life's up and downs. He's getting at something much bigger than a skill or mental habit. He's talking about feeling buoyant in the face of life, of rising to challenges without needing to duck them. And he's particularly talking about a sense of self that's strong enough to deal with unwanted thoughts by expressing them rather than banishing them, and in this way making them bearable.

At the heart of Joseph's message is the idea that students learn best when they want to learn, when they're confident and motivated enough not to fall back on emotional defences which in more compromised students pose a bar to learning. So what can we do to foster this kind of eager attitude to learning – besides the obvious things like making sure they eat protein for breakfast, exercise regularly, and turn out their light at a decent hour? As it turns out Joseph believes that these are very good places to start. They're just the kind of habits that foster deep and meaningful learning – and that pose an especial challenge for this generation of parents.

Quality sleep has become a real issue these days. Lots of students who use their bedrooms as media rooms simply aren't getting enough of it. In particular they're missing out on the deep part of the sleep cycle in which dreaming, and the processing of the days' experiences, occur. Students with the equivalent of jet lag are now common – falling asleep in their first lesson, without even the excuse of a post-lunch sugar drop to explain nodding off on their desk.

But as every teacher and parent knows, it's futile to bang on about the dangers of war games before bed, or to tut-tut at social networking after lights out. Just as in my day I grew deaf to well-meaning campaigns aimed at stopping smoking and teen pregnancy, today's teenagers hear warnings about overdosing on technology so many times that they instinctively block them out. Fortunately, in his presentations, Joseph had more potent tools up his sleeve than simply haranguing students and rapping parents' knuckles. Towards the end of his talk he showed a time-lapse video of an adolescent sleeping after playing violent games in order to wind down and reward himself following homework. His hands jerked over knotted sheets, twitching at invisible controls, his eyelids flickered incredibly rapidly, and his chest vibrated to what must have been a racing heartbeat - making it abundantly clear to viewers that this young man wasn't in the land of Nod.

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And the point of showing this video? In the first instance it was to show the sleep-lab subject – and the many thousands of students the world over who participate in 'The Amazing Brain' program – the physical effects of late-night gaming. Not in order to get them to quit gaming, but to persuade them that many of these effects can be avoided by playing games earlier in the evening, before rather than after homework. Joseph's reasoning is simple. Playing games earlier rather than later makes it less likely teenagers will spend their precious sleep processing conflicts arising from these games, and more likely they'll spend their sleep digesting the days' learning.

As proud owners of our own brain, we know there can be no magic bullet for its optimum functioning - however much experts tout the virtues of fish oil, Sudoku, foreign languages and music. This may be why John Joseph is more interested in approaches rather than rules, in strategies rather than do's and don't's. As a lifelong educator he knows that looking after teenagers' brains necessarily involves engaging their minds – their hopes, fears, ambitions and beliefs. He's well aware that if teenagers are to look after their brain in any meaningful way they need to assume responsibility, not just for the health of their brain, but for the health of their outlook.

Before farewelling us into the wet and blustery night John Joseph left us with a thought. Once teenagers have grasped what makes their brains tick, will they continue to risk harming their brain – every parents' nightmare – by getting their kicks from things that might damage it? Perhaps. But if they do, and here Joseph is certain, it will be the result of a deflated and knocked about sense of self, something that school and learning can only indirectly influence.

