



Hearts And Minds

Andrew Fuller writes about how parents and teachers can most effectively guide the education of teenagers.



In recent times we have learned so much more about how the adolescent brain ticks. This is great news. Even better news is that this knowledge can be used by parents and teachers to create improved outcomes for teenagers.

Adolescence is a time when two major processes are changing the brain and making it a much more sophisticated instrument. Understanding these processes

occur. This explains why, when you ask teenagers what they are thinking, they look dumbfounded and say, 'What?' or 'Dunno'.

The second main process that changes the brain is myelination. Myelin sheathing wraps itself around the axons and neurons of the brain. This process occurs throughout our lives, but accelerates in adolescence. Myelin sheathing turbocharges thinking, causing the brain to think up to 100 times faster. For a time, it's a bit like putting a Rolls Royce engine in a clapped-out Datsun 120Y. The adolescent brain can think extraordinarily quickly in some areas (consider privacy, embarrassment and arguing with parents), and exceptionally slowly in others (household chores and, in many cases, homework completion). One of the important things to know about myelin sheathing is that it isn't laid down just anywhere. It is laid down where the brain is used.

adolescents towards better outcomes by slowing down their world from time to time and providing pause points and times for discussion, debate and reflection.

In families, this means putting back the small rituals of life. These are the seemingly mundane, but regular, events in family life that might include having a conversation over dinner, the Sunday lunch or walking the dog together. These rituals are highly protective and foster conversation and reflection.

For schools, this means stepping away from rushing through the curriculum, and planning learning experiences that have rhythm and repetition. Some schools are frenzied factories where the teachers seem hurried, the kids seem frazzled and the parents look anxious. Other schools plan

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can help to facilitate a calmer household and a more productive classroom.

The first of these processes is synaptic pruning. Synapses are the connections between brain cells, and we build trillions of them during our first nine years of life. Then the human brain does something really weird – it gets rid of most of them. During adolescence, more than half of the synapses vanish.

In a way, this is biology's way of saying, 'OK, we're going to provide you with all the synapses you could ever need and from then on it's up to you. We now will only keep the ones you use.' This means that the activities of teenagers affect the structure of their brains.

Most of the synapses that are lost during adolescence are in the frontal lobes, where planning, forethought, impulse control and consideration of long-term consequences

What this all adds up to is that the experiences that we give adolescents in homes and in schools are incredibly important because those experiences shape their brains. For the first time, we have research that shows that by immersing teenagers in high-quality experiences we can help them to become smarter. For anyone raising or teaching teenagers, this is incredibly exciting news. The discussion about exactly what experiences we should be immersing teenagers in is likely to have a significant impact on schools and parenting within the next few years.

We live in the age of interruption in which continuous, undistracted thought and conversations are a rarity. In order to address this, slowing things down a bit can be of benefit to adolescents in both school and home environments. Teenagers love the high-action, high-impact world, but it doesn't always love them. Parents and teachers can steer



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Education has, in recent years, become too much about things of the head and mind and not enough about the heart and hands. Childhood has become an indoor game, resulting in many adolescents being information-rich but

continued on page 23