



Making Learning Last: Using Research on Memory to Support our Children's Academic Outcomes

In 2017, Professor John Hattie of the University of Melbourne published a large scale meta-analysis of the factors which impact children's academic outcomes. His analysis drew on over 80,000 studies involving over 300 million children worldwide. One factor which was shown to negatively impact children's academic results was the long summer break, during which time many children actively avoid any kind of academic learning. With children out of school even longer this year because of Lockdown, many parents are concerned that the impact on children's academic progress could be even greater.

So how can we ensure that our children's learning – at home or in school – lasts beyond Lockdown? Research on memory holds the key:

1. Firstly, help your child to access initial learning by linking new information to what they already know or to their own prior experiences. For example, when introducing forces in Physics, you could start by reminding your child of the time they fell off their bike. When we make learning concrete by linking it to existing 'schema' in the long-term memory, that new learning is easier to retain.
2. We all learn through a multi-channel approach – visual, auditory and kinaesthetic. Encourage children to access information through more than one memory channel; e.g. listen to a podcast, as well as reading about a topic. This reduces cognitive load, helps to move information from the working memory to the long-term memory and enables learners to retain a greater proportion of what they are learning.
3. Invite children to re-present information in a different format, such as drawing a diagram, writing a summary, recording a vlog or teaching a family member about the topic. This act of rehearsal or revisiting improves retention in the long-term memory.
4. 'Low stakes' testing has also been found to support improved retention of information, so let your child devise a quiz on their chosen topic and test themselves a day or a week later. Kahoot (kahoot.com) and Quizlet (quizlet.com) both offer user-friendly software for this purpose and the quizzes can be revisited again and again. 'Low stakes' tests are informal, fun, regular tests as opposed to 'high stakes' exam-style tests where the results might impact a child's future prospects. So re-brand a 'low stakes test' as a 'quiz' or 'puzzle'.



5. It is vital that 'low stakes' tests are seen as developmental and that results pressure is not applied by us as parents. When children begin to see tests as having increasingly high stakes, they become less willing to take part for fear of failure. This significantly hinders the learning process as well as potentially damaging self-esteem.
6. Rehearsal and repetition reinforce retention: In order to secure learning in the long-term memory, children should ideally revisit their learning at regular intervals, e.g. after a week, a month, a half-term, a term. This approach is known as interleaving. Re-testing via a low stakes quiz or re-presenting the information in a different format both work well for this purpose. (Re-reading and simply highlighting provide far less benefit in terms of retention.)
7. Initial learning, memorisation and revision are supported by adequate sleep, nutrition and hydration. So let's get the basics right – a healthy breakfast, a drink of water and a good night's sleep lay the foundations for our children to fulfil their academic potential.

