

Mindprint shows how a student learns

How a student learns best can be revealed through a painless cognitive test which can be done anywhere, **ET Staff**

We do a lot of testing, most of it around what students have learned, it's been that way for a long time and all things considered it might be an idea to shift the testing to focus on discovering how a student learns.

An investigation of where each student is, the way they gain knowledge and how their education could be moulded to suit their profile would be ideal, however, the downside is it would mean yet more testing, more administration, more work ... there's also the question of how to do it.

It might not necessarily be a lot more bother and the testing doesn't have to be of the expensive, time consuming, high pressure sort that characterises big standardised tests; powerful insight can be achieved through existing tools like Mindprint which is designed to be done from home or anywhere really.

The Mindprint assessment comes out of neuroscience research and identifies how a student learns. It has been used by some very heavy hitting organisations in the States including the US Army and NASA, the results of the tests and the effect of their insights have been documented in 250 odd academic papers.

Nvoke Future Learning CEO Ash Kumar spent a long time at university, he is a Harvard alumnus and there were two masters before that. Nvoke Future Learning has the rights for Mindprint in Australia; Kumar met Mindprint CEO Nancy Weinstein at Harvard which led to their working together.

Mindprint was developed for use in medical research but has broad applications. A mature product has now been presented to education, and



Ash Kumar

Australia is the first country to see Mindprint for education outside of the US.

Australia is one of the places Kumar calls home, he splits his time between Queensland and the US, so an Australian launch seemed to be a natural first step into markets outside of the States.

"If you talk to schools they are totally overwhelmed with the amount of change and the amount of things that they have to do, to add one more thing is adding to their pressure and not helping them. We look at things for a perspective of 'how can we assist?'"

"We wanted to make something that assisted learning and not teaching as such, we talk about tailored learning a lot but to have tailored learning you have to have a tailored understanding of individuals.

"We have teachers who are good at teaching and have an understanding of what the students need, but that is limited and needs to be supported by well-structured data so they can confidently believe that what they are doing will actually help the kid.

"You could take the approach of

trial and error to see what works and what doesn't but the cost of that is too high. Say a teacher has tried three different approaches to teach a student maths, none have worked and the child is still disinterested, we need to discover what the core problem is," he says.

"There needs to be an individual perspective as to who you are, what your capabilities are and how you apply it and how it impacts every single subject that you learn. To me that is going to the core of the problem and offers an opportunity to help somebody."

Mindprint's cognitive battery was developed by neuroscientists in the Brain Behaviour Laboratory at the Perelman School of Medicine at the University of Pennsylvania and brings the 'Penn Computerised Neurocognitive Battery' (CNB) to students.

Mindprint presents a series of computerised tests that measure accuracy and speed of performance in the major domains of cognition. It has been tested in over 100,000 participants worldwide including more than 20,000 children and 50,000 members of the armed services.

The test has been normed by age, requires no mediation and can be completed at home when the student is at their most relaxed, there isn't even a set time in which the Mindprint assessment needs to be completed. The testee is free to get up, take a break and complete the assessment at their own pace but most take around an hour to finish.

That means straight off the bat the test is designed to examine what the student can do and not their ability to cope with factors like stress. Also, the onus is taken off the teacher and the education system to administer yet more testing on top of everything else that needs to be done at school.

The assessment includes a series of



nine short modules, there are no reading passages and no maths computations. Students report that the questions or problems in the Mindprint test are quite fun to complete, more like puzzles or games than regular exam questions.

Hand movement is also recorded, how quickly you move things and stack things is noted so the assessment picks up motor function as well.

The results of the assessment are provided five days after the test has been completed in a Mindprint learning profile.

The student's comparative performance across the 10 cognitive areas are listed with advice on how to progress. Their profile is matched to extensive resources, they call it a toolbox, on MindprintLearning.com so areas of weakness can be worked on. The resources listed there are designed to be used to boost the student's learning in ways that they will find engaging.

"If someone is really good you get blinded by what they are not good at, if somebody is bad at something everything is elevated, everything looks bad for that student, so educational biases come into play very quickly, we wanted something that could alleviate all of that.

"We're basically professional consultants and we're engaged in organisational

transformational change, the goal was to bring transformation to schools in Australia.

"This assessment has built in strategies for students, teachers and parents. Teachers don't have to read the report and come up with a strategy they can download the strategy. The same thing for the parents, they can download the strategy and help. It's kind of sharing some of the responsibility with the parent," Kumar says.

The staff at Nvoke Future Learning have become convenient test subjects for the assessment, Kumar has used the test to clarify how they perform optimally. Apparently, Valeria from marketing was found to need some support in her ability to focus.

"Valeria liked to put her headphones on and get on with a task, for her to grasp

a concept she needed to block out all noise. It's a really simple example of how you perceive a behaviour and what it really means; for her to succeed she needs have a quieter place.

Her strengths lay in abstract reasoning and flexible thinking so she can find multiple solutions to a problem and adapt to new situations. Valeria's strong reasoning skills make her a natural group leader.

This kind of assessment is highly relevant to students as Mindprint offers strategies to nurture strong skills while improving areas where help is needed.

Want to learn more?

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Mindprint investigates 10 cognitive domains

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|----------------------|-----------------------|---|
| 1 Visual Motor Speed | 6 Flexible Thinking |  |
| 2 Verbal Memory | 7 Verbal Reasoning | |
| 3 Visual Memory | 8 Spatial Perception | |
| 4 Processing Speed | 9 Attention | |
| 5 Working Memory | 10 Abstract reasoning | |