

RESEARCH DIRECTIONS

Brain Gain

Dr Nida Denson from the Centre for Educational Research and Professor Christine Halse from Deakin University are collaborating with primary schools in the Liverpool region to investigate the impact of an innovative 'Brain Training' game to improve numeracy skills. This research has been funded by the NSW Department of Education and Communities Priority Action School Grant Scheme.

'This project builds on a successful pilot conducted at Liverpool West Public School in 2009 that investigated the use of a hand-held console and 'Brain Training' game to improve accuracy and speed of calculation of maths problems' explains Professor Halse. 'The game was inspired by work in the neurosciences by Professor Kawashima and involves a variety of puzzles and maths questions presented on a hand-held electronic device. The problems are designed to stimulate brain activity. However, it has been unclear whether users actually achieve real educational benefits. The pilot showed promising results and there was some evidence of improved scores. Now, we want to extend the sample size and number of locations to get more nuanced results.'

The researchers will test students in years 2 and 4 at four Western Sydney primary schools before and after the use of the 'Brain Training' game. They will also compare results to more traditional ways of teaching and improving maths skills. The team will identify difference in results between different sub-groups, such as male and female, different ages, students with English as a second language and Indigenous students.



This project will provide vital evidence-based information on the wider impact of the 'Brain Training' initiative on participating schools, including school engagement in maths, development of student mentoring and leadership skills, and professional development and capacity building in teachers. This will enable sound decision-making at the policy level by schools and NSW Department of Education and Communities about possible roll-out of the program to other NSW schools. The project has the potential to improve the numeracy skills of a generation of young Australians, especially those from Indigenous backgrounds.

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Contact Details: n.denson@uws.edu.au
<http://www.uws.edu.au/cer>
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