

Language, Reading & Math in Children

A study of the skills that support children's learning

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A GREAT START!

Our new project aimed at understanding how kids learn began in September 2009. The study is taking place in 34 schools between Woodstock and Komoka. All of the children in Senior Kindergarten to Grade 4 received invitations to participate. Parents of over 1000 agreed to allow their child or children to be in the study. We learn more about children's learning patterns by studying such a large group. To all those children and parents in our study, thanks!

THANK YOU!

In this newsletter, you'll find out about our research team, and our current and past studies. If you'd like more information, please contact us at the information provided below.

Our past newsletters are available at
<http://www.uwo.ca/fhs/lwm/newsletters.html>

STEP ONE

Right now, we are currently completing the first step of our large study. We're seeing each child in his/her school and asking him/her to do 3 things: repeat sentences, read some words and some made up words, and do some math questions.

THE RESEARCH TEAM



Dr. Lisa Archibald
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Lisa studies memory and language in children, and why some children have trouble learning language.



Dr. Marc Joanisse
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Marc studies the skills and brain mechanisms that support language and reading.



Dr. Daniel Ansari
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Daniel studies number knowledge in children, and the changes in the brain as number skills develop.



Dr. Janis Cardy
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Janis studies the brain and genetic bases of language and communication disorders in children.

NEWS FROM OUR PAST STUDIES

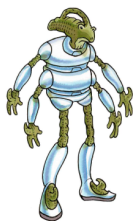
Our past studies involved groups of children who either: (1) have difficulty learning language, (2) have trouble remembering things, or (3) have typical language and memory skills.

WORD LEARNING

In our 'gummi bear' study, we asked children to repeat made up words with and without a gummi bear between their teeth. The gummi bear changed the place of the child's tongue and lips. We wanted to see if the children could adjust the movements of their tongue and lips to produce normally clear speech.



We found that only the children experiencing language learning difficulties had trouble producing clear speech in our gummi bear task. Maybe, these children have more difficulty sensing where their tongue and lips are while speaking.



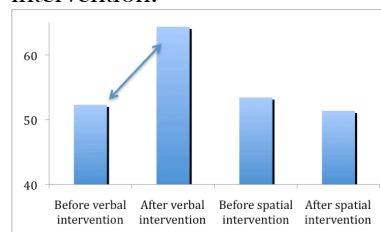
In our 'aliens' study, children learned the name of 8 aliens. Four of the names were common (like 'Peter') and the rest were made up (like 'Sommel').

We found that the children with difficulty learning language had more trouble learning the made up names for the aliens. Maybe, these children have more difficulty holding new words in memory.

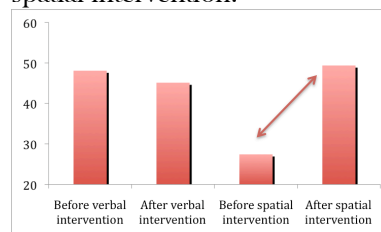
INTERVENTION

In our language and working memory intervention study, we completed two 4-week sets of individual sessions with a small number of children. One session was focused on learning verbal information, and the other on learning spatial information.

The children improved on a memory measure of verbal information (percent picture names recalled) after the verbal intervention:



The group improved on a spatial task (percent geometric puzzles completed) after the spatial intervention:



All of the children improved on measures taken before and after the intervention sessions. Children with language difficulties improved the most on their grammar skills and remembering verbal material. Children with memory difficulties improved the most in remembering verbal and spatial information.

IN THE CLASSROOM

A last study looked at these children in the classroom. Children with language or

memory difficulties experienced similar difficulties in school. These findings may mean that similar strategies can support these learners in the classroom.

SPECIAL THANKS!

We'd like to say a special thanks to all those who have helped or are helping us organize and complete our studies:

TVDSB Language and Memory Group: L. Culhane, C. Davison, D. Griffiths, E., Henderson, K. Huff, T. Lomas, T. Major, M. McKay, B. Mencil, D. Moser, C. Nicholson, Y. Nieuwesteeg, P. Rodd, C. Stager, A. Terry, N. Vanbussel

School Personnel: All teachers, secretaries and principals providing assistance, in particular, R. Auckland, J. McCredie, M. Hesse, E. Georgilidis, D. Lavery, D. Duff, M. Lee, S. Shackleton, E. Wise, S. Empringham, J. Shewfelt, R. Taylor, M. Pezzutto, D. Gulyaprak, C. Patterson, J. Bruce, L. Newell, D. Baran, M. Chevalier, D. Ennis, M. Murray, T. Vanderwallen-Howey, R. Culhane, M. Roes, D. Ferri, J. Hack, B. Travnicek, P. Beaudin, S. Moore, J. Munds, A. Privitera, A. Saunders-Currie, L. Baker, S. Blais, S. McCombe, L. Santyr, B. Dunn, M. Cordy, C. Milligan, A. Luce, P. Baker, V. Morrison, K. Ledingham, L. Campbell, L. Thompson, R. Gould, L. Acre, C. O'Brien, D. Spence, J. Newman, S. Warboys, K. Viger, Y. Elliott, B. Dick, A. MacKinnon

TVDSB Personnel: Vesna Fernandez, Steve Killip

UWO Students: E. Broxterman, T. Levee, J. Berger, E. Sterling, B. Jeronimo, B. Adamson, B. Rose, J. Butts, S. Wener, A. Roth, J. Paradis, J. Tsui, T. Ramnarain, S. Cloutier, K. Brittain, J. Herczeg, J. Akman, L. Urbanek, L. Vannus, A. McDermid, E. Lipari, A. Dodge, M. Punnoose, R. Nadler, A. Canton, J. Brubacher, S. Rivers, H. Molyneaux, A. Remark, R. Merkley, S. Davis, S. Nancekivell, A. Laviolette, C. Schlesinger, M. Ditmars, M. Brown, A. Dirks, E. Gilseman, S. Hellen, H. Fraser, A. Ingram, J. Nyentap, C. Arsenault, J. Cavalier, S. Hansen, J. Weber, S. Rainham, K. Foo, J. Proctor, K. Flook, D. Alsakka, L. Frieri, A. Baker, K. Terpstra, L. Pauls, T. Lin, H. Brown

Others: L. Cryderman, A. Beier, E. Robbs, J. Merritt, A. White, K. Doyle