

SUMMER 2014



THE UNIVERSITY OF MICHIGAN

Pathways to Literacy Lab

Dear Friends,

We would like to thank you for your continued support and interest in our research at the University of Michigan Pathways to Literacy Lab! Over the past decade, we have conducted research on children's cognitive, literacy, and social development over the school transition period. Our projects involve basic research studies that aim to evaluate and improve children's learning during the preschool and early school years. More recently, we have been exploring the effects of school on the development of children's brain and behavior.

This newsletter describes some of our current studies, as well as information about ongoing research and upcoming projects. For example, page 3 describes our current research and its impact on early elementary education. Additionally, "Relationships among Stakeholders in Special Education" describes the importance of strong communication between special education staff and families of students with special needs to promote educational opportunities.

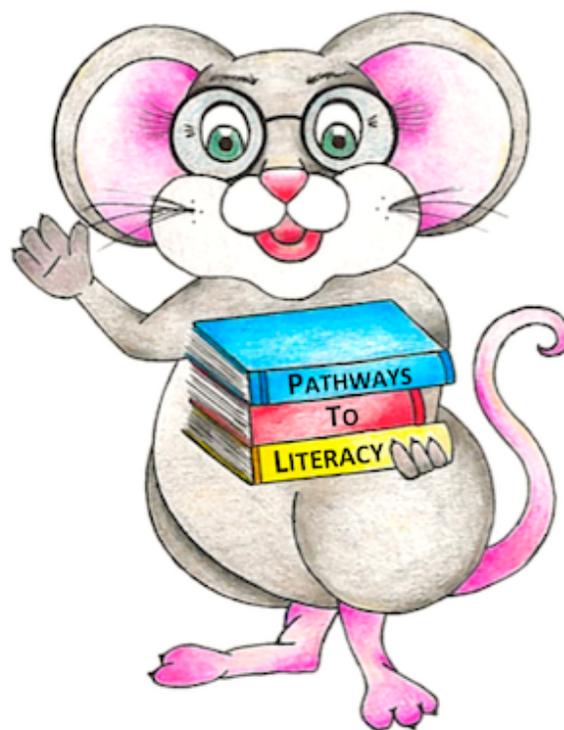
We hope you enjoy reading this newsletter! Please visit us on the Web to learn more about our projects, our Research Team, and much more (<http://sites.lsa.umich.edu/pathways-lab/>)! Once again, we are extremely grateful for your continued support and interest in our research!

A handwritten signature in cursive script, appearing to read "Fred Morrison".

Fred Morrison
Professor of Psychology and Education

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Relationships among Stakeholders in Special Education

Adrienne Woods

Last year, we conducted interviews with parents, teachers, administrators, and specialists at a local school district regarding attitudes about special education. We were interested in examining how these groups relate to and interact with one another in the context of K-12 special education. Several interesting results emerged from these interviews, with important implications for special education and relationships between the home and school.

The most evident findings were the difference in the amount of communication between parents and schools, overall satisfaction with special education services provided by the schools, and available resources to parents and educators. Other issues included parents experiencing increased trouble getting services for their child, and communication issues among younger children and/or children with that were not immediately apparent or understood (“invisible”). Both parents and educators expressed a desire for an increase in communication. Many parents felt a lack in the support from the district and little sense of community among families of special needs children. Finally, there was inconsistency in the amount of resources given to general education teachers working with students with special needs, and inconsistencies in funding and support for teacher consultants.

Despite the challenges expressed, most respondents felt that the benefits to inclusion for all children outweighed the costs. However, many participants were still concerned with classroom distractions and bullying, as well as the continuing sense of separation between general and special education. Valuable recommendations for improvement were suggested, including additional individualized instruction, more teacher training, collaboration, and flexibility within classrooms.

Overall, the results of this study help to shed light on some important issues, and will direct future research efforts in a meaningful way. We are planning on using surveys that will capture a larger sample, which we can use to apply these findings in this district and others.



Student Self-Regulation

Noah Neidlinger

This past spring, we worked with kindergarten students and teachers to determine how children’s *self-regulation skills* (which can be thought of as ‘self-control skills’) impact each other during school activities. For example, does a student with a “high” level of self-regulation help regulate a student with “low” self-regulation? Since students often work together, it is important to understand what factors impact how well students work together and how these factors impact teachers’ instructional decision-making.

Students were assessed individually using the Head-Toes-Knees-Shoulders (HTKS) task, similar to ‘Simon Says’, where children must do the opposite of what they are told. For example, if the researcher says, “touch your head”, children must remember to touch their toes.

About a week after the initial assessment, students were paired up with a partner based on two factors 1) whether they were “best friends” (according to the students and the teacher) and 2) whether they had scored ‘high’ or ‘low’ on the individual HTKS task. Some pairs of students were ‘friends’ in which both students scored ‘high’ on the HTKS, some pairs were ‘nonfriends’ who both scored ‘high’ on the HTKS, and so on. Students were also given a puzzle to work on together for eight minutes. We were looking to see how well students worked together, what kind of language and actions they use to solve the puzzles, and how many puzzles they were actually able to solve. Teachers were surveyed regarding classroom decision-making to understand whether and how teachers used group work, and how they made decisions on seating charts.

Analyses of the data are ongoing, however, preliminary results are very interesting and relevant to educators. We plan to return to schools in the future with updates about this study and how the results can help inform teaching practices.

Executive Function: What is it and Why Does it Matter?

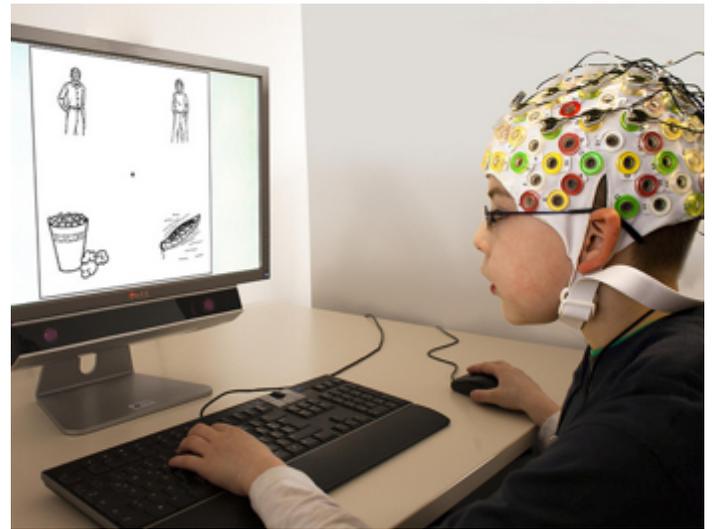


We believe that it is important to understand how young children develop skills for learning in the classroom during early elementary school years. By observing children's behavior and their brain activity, we can better understand how school and classroom experiences influence children's growth in important classroom skills. Particularly important for learning is the development of executive function, or mental skills that help connect past experience with present and future action, commonly used to perform activities such as planning, organizing, strategizing, paying attention to and remembering details, and managing time and space.

Although executive function emerges at a very young age (about 18 months), its development over time has received increased attention among researchers seeking to understand the basic factors that shape its development. In recent years, studies have found links between children's executive function and academic achievement, making it an area of research that requires additional investigation.

One way of investigating executive function is to look at children's ability to self-regulate—from raising their hand in class when answering a question to regulating their behavior around others—and what factors contribute to its development. In the current study, we plan to investigate the influence of school on the development of executive function. Specifically, we will look at children with birthdays that fall close to the cut-off date, with some remaining in kindergarten while others enter first grade, hoping to reveal important information about the effects of school on the development of executive function in children.

Previous research has indicated that there are many factors that contribute to children's development of literacy, math skills, language, and social skills starting early in life and continuing through the school years. Many parents wonder if their child is ready for the school transition, or if their child is developing these skills at an appropriate pace. Our research focuses on whether the development of these skills is a result of environment (experience in school) or natural growth (natural development). Upcoming projects will address this research question and will enable us to better understand the complexities of school transitions.



What is an ERP and Why Does it Matter?

An ERP is an acronym for the term “event-related potential.” The brain produces electrical signals while we think and work, and the ERP is simply a pattern of electrical signals generated in response to a specific event or task. We will be using EEG technology to measure ERPs. The technology we use is safe and non-invasive, and simply measures electrical activity on the surface of the child's head (the scalp). A number of studies using this technology have been conducted with infants and young children. All materials that come into contact with your child have been thoroughly cleaned and sterilized.

The new and exciting part of our current project that will be using ERP equipment that will allow us to measure children's brain responses while they are engaged in tasks. Brain waves are measured through a small cord in the back of the cap, which is connected to a recording computer. Ultimately, we hope this project will provide us with important information about the role of early school experiences for children's developing skills and how they are related to later achievement.





Pathways to Literacy



Our research is conducted by an amazing team of research staff, graduate students, and undergraduate researchers, led by Dr. Frederick Morrison, professor of Psychology and Education.

We would like to thank our wonderful Research Team for their hard work and dedication in making our research possible!

Faculty

Dr. Pamela Davis-Kean, Dr. William Gehring, Dr. Jennie Grammer, Dr. Frederick Morrison

Staff

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Research Assistants

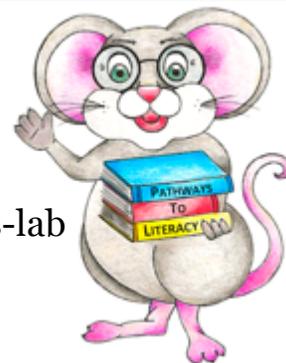
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Contact Us!

If you have any questions or would like more information about how to get involved in this project, feel free to contact us at (734) 647-9439 or PathwaysLab@umich.edu.

Check Us Out Online!

sites.lsa.umich.edu/pathways-lab



RECENT PUBLICATIONS

As we continue to collect and code data for our studies, we are also planning to present our findings at a variety of professional conferences and symposia.



Skibbe, Lori E., Hindman, Annemarie H., Connor, Carol M., Housey, Michelle, & **Morrison, Frederick J.** (2013). Relative Contributions of Prekindergarten and Kindergarten to Children's Literacy and Mathematics Skills. *Early Education & Development, 24*(5), 687-703.

Connor, Carol M., **Morrison, Frederick J.**, Fishman, Barry, Crowe, Elizabeth C., Al Otaiba, Stephanie, & Schatschneider, Christopher. (2013). A longitudinal cluster-randomized control study on the accumulating effects of individualized literacy instruction on students' reading from 1st through 3rd grade. *Psychological Science*.

Wanless, S.B., McClelland, M.M., Lan, X., Son, S-H., Cameron, C.E., **Morrison, F.J.**, Chen, F-M., Chen, J-L., Li, S., Lee, K., Sung, M. (2013). Gender differences in behavioral regulation in four societies: The U.S., Taiwan, South Korea, and China. *Early Childhood Research Quarterly, 28*, 621-633.

Grammer, J. K., Coffman, J. L., & Ornstein, P. A., & **Morrison, F. J.** (2013). Change over Time: Conducting Longitudinal Studies of Children's Cognitive Development. *Journal of Cognition and Development, 14*, 1-14.

Skibbe, L. E., Bindman, S. W., Hindman, A. H., Aram, D., **Morrison, F. J.** (2013). Longitudinal relations between parental writing support and preschoolers' language and literacy skills. *Reading Research Quarterly, 48*, 387-401.

Skibbe, L.E., Hindman, A. M., Connor, C. M., Housey, M., & **Morrison, F. J.** (2013). Relative contributions of pre-kindergarten and kindergarten to children's literacy and mathematics skills. *Early Education & Development, 24*, 687-703.