

**Jessica Marjorie Black, Ph.D.**

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**EDUCATION**

- 2010 Postdoctoral Scholar**, Stanford University School of Medicine, Stanford, CA  
Department: Psychiatry, Center for Interdisciplinary Brain Sciences Research (CIBSR)  
Program: Neuroscience  
Emphasis: Education, Motivation, Dyslexia  
Years: April 2008- June 2010
- 2008 Ph.D.** Stanford University, Stanford, CA  
Program: Education; Field of Study: Educational Psychology  
Minor: Psychology  
Dissertation: *Academic Self-Concept, Subjective Task Value, and Beliefs about Intelligence in Dual-Language and English-Only Elementary School Students*
- 2006 M.A.** Stanford University, Stanford, CA  
Program: Education; Field of Study: Social Sciences in Education  
Thesis: *Fit to Belong: Self-Esteem in Context*
- 1998 B.A.** University of California, Berkeley, CA  
Summa Cum Laude with Highest Distinction in General Scholarship  
Major: Psychology

**RESEARCH INTERESTS**

Achievement Motivation, Dyslexia and Special Education, Child and Adolescent Development, Educational Neuroscience

**HONORS AND AWARDS**

Motivation SIG Travel Award, American Educational Research Association, 2009  
NIH Research Training Grant (T32), 2008-2009 & 2009-2010  
Spencer Research Training Grant, 2007-2008  
Post Candidacy Travel Fellowship, Stanford University School of Education, 2008  
Motivation SIG Student Travel Award, American Educational Research Association, 2008  
School of Education Fellowship and Research Award, Stanford University, 2002-2007  
Post Candidacy Travel Fellowship, Stanford University School of Education, 2005  
Phi Beta Kappa, Alpha of California at the University of California, 1998  
Summa Cum Laude, University of California, Berkeley, 1998  
Alumni Scholar, University of California, Berkeley, 1998  
Mortar Board National Senior Honor Society, 1997  
Golden Key National Honor Society, 1997  
Alumni Scholar, University of California, Berkeley, 1997

## TEACHING EXPERIENCE

- 2009**      **Lecturer**  
**School of Education (SUSE), Stanford University, CA**  
Courses: EDUC144 *Child Development in and Beyond Schools* and EDUC240 *Adolescent Development and Learning*. Teaching graduate students in the elementary and secondary teacher-credentialing program. Design of course materials, assignments; use of course website and lectures using PowerPoint, video, group activities and small group discussions.  
Course: *Introduction to Educational Neuroscience*. Proposal and design of inaugural SUSE course (Spring 2010) introducing undergraduate and graduate students to neuroimaging research. Content offers implications for curriculum and instruction, and child and adolescent development. Focus on typical and atypical development from biological, cognitive and socio-emotional perspectives.
- 2006**      **Lecturer, Department of Child and Adolescent Development**  
**College of Education, San José State University, CA**  
Course: *Social and Emotional Development in Childhood and Adolescence*; four classes totaling 120 students; upper-division undergraduate majors and minors, majority on teacher credential track; use of PowerPoint; course website; design of group projects and assessment materials.
- 1991-2006**      **Math Teacher**  
**Head of Summer School Math Department 2003-2007**  
**Crystal Springs Uplands School Summer Enrichment, Hillsborough, CA**  
Design of curriculum and courses; classes are multi-grade (4, 5, 6 and 7, 8, 9); students come from a wide variety of public and private schools and with varying math knowledge; some students have IEP's or 504's.

## RESEARCH EXPERIENCE

- 2008-present**      **Postdoctoral Scholar, Neuroimaging, Reading, Motivation**  
**Center for Interdisciplinary Brain Sciences Research, Stanford University**  
*Project Manager for the Reading Brain Study*, a longitudinal study of kindergarteners with high-risk for developing reading disabilities.  
<http://readingbrain.stanford.edu/Welcome.html>. Responsibilities include: assessment decisions, recruitment, Near Infrared Spectroscopy (NIRS), home observation, MRI (3.0T) and analyses (functional, structural, DTI) using SPM (2) and (5). *Project Coordinator for the Humor Study in Children* examining the neural development and behavioral characteristics of humor in young children. Supervision, training and evaluation of undergraduate and graduate students. Both projects involve grant writing for internal and external funding.
- 2007-2008**      **Research Assistant, Dyslexia Neuroimaging**  
**Center for Interdisciplinary Brain Sciences Research, Stanford University**  
Analysis of reading and motivation-related behavioral and imaging data for dyslexic and typical adolescent readers in longitudinal study. Use of Matlab and SPM(2).

- 2007**                    ***Research Associate, Developing Success Attributes in Dyslexic Students Thrive Foundation for Youth***  
 Identified characteristics of successful students with learning differences. Design of school-based curriculum to foster resiliency and support gifts and talents of students identified as learning disabled.
- 2006-2007**            ***Research Assistant, School Transitions and Motivation***  
**2002-2004**            **Dr. Deborah Stipek, Dean, Stanford University School of Education**  
 Generated qualitative codebooks and coded parent interviews related to elementary school transitions, family and school environments, and achievement motivation; training and supervision of undergraduate research assistants.
- 2005**                    ***Research Assistant, Teacher Credentialing***  
**Dr. Connie Juel, Stanford University School of Education**  
 Collaborated on design of a study of students in teacher credentialing programs; questions related to teacher motivation, satisfaction, expectations and retention.
- 2004-2005**            ***Research Assistant, Dyslexia and fMRI***  
**Dr. John Gabrieli, Stanford University Psychology Department**  
 Recruitment, delivery of reading battery assessment (pre/post), data analysis, and fMRI of school-aged subjects for two studies examining computer-based interventions for poor readers and dyslexic students; structural MRI and fMRI using 1.5T and 3.0T; use of MatLab and SPM99.
- 2001-2002**            ***Senior Research Associate***  
**Kensington Research Group, Kensington, CA**  
 Program evaluator; grant-writer; Project Director of Career Ladder in West Contra Costa School District, a program assisting Instructional Assistants in public school classrooms to enter college to become full-time classroom teachers in their communities; Project Coordinator for Even Start, a family-based literacy program.
- 1998-2001**            ***Research Assistant, Psychophysiology***  
**Dr. Robert Levenson, U.C. Berkeley Department of Psychology**  
 Utilized polygraphs and video recording to assess the relationship among job stress, job pleasure, marital stress, and marital pleasure with married couples in law enforcement; developed coding manual; piloted coding system for study on facial expression of emotion.
- 1999**                    ***Research Assistant, Schooling***  
**Dr. Rhona S. Weinstein, U.C. Berkeley Department of Psychology**  
 Literature reviews, data entry, and manuscript editing for work on self-fulfilling prophecies in schooling and prevention of school failure. Book title: *Reaching Higher: The Power of Expectations in Schooling*, Harvard University Press, 2002.
- 1998**                    ***Independent Research, Culture, Gender, and Math Achievement***  
**Course in Community Psychology, U.C. Berkeley Department of Psychology**  
 Explored the relationship among cultural values, gender, grade level, and math achievement in a sample of seventy students in an ethnically-diverse, school-aged population.

**1997-1998**     *Research Assistant, Language and Numerical Representation*  
**Institute of Human Development, U.C. Berkeley Department of Psychology**  
Conducted experiments with 10- and 11-month infants to explore the relationship between numerical representation and word comprehension; designed apparatuses to be used in experiments; conducted parent phone interviews; reliability coded for looking time in videotapes; entered data.

#### **PEER-REVIEWED PUBLICATIONS**

Hoeft, F., Meyler, A., Hernandez, A., Juel, C., Taylor-Hill, H., Martindale, J.L., McMillon, G., Kolchugena, G., **Black, J. M.**, Faizi, A., Deutsch, G.K., Siok, W.T., Reiss, A.L., Whitfield-Gabrieli, S., and Gabrieli, J.D.E. (2007). Functional and morphometric brain dissociation between dyslexia and reading ability. *Proceedings of the National Academy of Sciences, USA, 104* (10): 4234-4239.

#### **MANUSCRIPTS IN PREPARATION**

**Black, J. M.** (in preparation). Through the lens of language: Exploring intelligence beliefs among dual-language and English-only students.

**Black, J. M.** (in preparation). The dimension of children's academic self-concepts in linguistically diverse educational settings.

**Black, J. M.**, Reiss, A. L., Gabrieli, J. D. E., & Hoeft, F. (in preparation). Differential associations with socioeconomic status and brain activation in adolescents with and without dyslexia.

**Black, J. M.**, & Stipek, D.J. (in preparation). Adolescents' self-esteem as a function of the classroom context: Feeling like you belong matters.

Hoeft, F., McCandliss, B., **Black, J. M.**, Gantman, A., Zakerani, N., Hulme, C., Lyytinen, H., Whitfield-Gabrieli, S., Reiss, A. L., & Gabrieli, J. D. E. (in preparation). Right inferior frontal activation and superior frontal fascicular white matter integrity predict future reading gains in children with dyslexia.

#### **PRESENTATIONS**

Gelbach, H., Nolen, S., Turner, J., & **Black, J. M.** (2010, May). A new mix of methodological perspectives on studying motivation. Discussant: Deborah Stipek. Symposium proposal submitted to the annual meeting of the *American Educational Research Association*, Denver.

**Black, J. M.**, Digby, N. P., Reiss, A. L., Hoeft, F. (2009, June). Socioeconomic status and brain activation are differentially associated for dyslexic versus typically-reading adolescents. Paper presented at the annual meeting of the *Society for the Scientific Study of Reading*, Boston.

Hoeft, F., **Black, J. M.**, Hulme, C., Tanaka, H., Reiss, A. L., Hoeft, F. (2009, June). Neural correlates of low achievement (LA), aptitude-achievement discrepancy (AAD) and response to intervention (RTI) models in poor reading children. Paper presented at the annual meeting of the *Society for the Scientific Study of Reading*, Boston.

- Black, J. M.** (2009, April). Academic self-concepts of children in diverse language contexts: measurement and dimension. Paper presented at the annual meeting of the *American Educational Research Association*, San Diego.
- Black, J. M.** (2008, August). Task value and perceived competency: Age, gender and language effects. Paper presented at the annual meeting of the *American Psychological Association*, Boston.
- Black, J. M.** (2007, October). Indicators of thriving among students with learning differences. Paper presentation at the *Forum on Thriving*, Minneapolis, MN.
- Black, J. M.** (1999, May). Family influence on student math achievement. Paper presented at the annual *UCLA Psychology Undergraduate Research Conference*, Los Angeles, CA.
- Black, J. M.** (1998, May). Culture, ethnicity, and math achievement in a school-aged population. Paper presented at the *Research Symposium in Community Psychology: Addressing Issues of Ethnic-Cultural Diversity*, University of California, Berkeley, CA.

## POSTER SESSIONS

- Black, J. M.** (2009, August). Affect and competency separation within academic self-concept: Just age effects? Poster session presented at the annual meeting of the *American Psychological Association*, Toronto.
- Black, J. M.,** Nagamine, M., Mazaika, P.K., Tanaka, H., Stanley, L. M., Heitzmann, J., Zakerani, N., Red, S., Digby, N. P., Saleh, M., Glover, G. H., Reiss, A. L., Hoeft, F. (2009, June). Differential brain activation in 5- and 6-year-olds with and without family history of reading difficulty. Poster session presented at the annual meeting of the *Organization for Human Brain Mapping*, San Francisco.
- Nagamine, M., **Black, J. M.,** Mazaika, P.K., Tanaka, H., Stanley, L. M., Heitzmann, J., Zakerani, N., Red, S., Digby, N. P., Saleh, M., Glover, G. H., Reiss, A. L., Hoeft, F. (2009, June). Neural basis of phonological processing in kindergarten children at risk for dyslexia. Poster session presented at the annual meeting of the *Organization for Human Brain Mapping*, San Francisco.
- Tanaka, H., **Black, J. M.,** Reiss, A. L., Hoeft, F. (2009, May). Neural correlates of phonological processing in children with low achievement, aptitude-achievement discrepancy and no reading impairment. Poster session presented at the annual meeting of the *Association for Psychological Science*, San Francisco.
- Black, J. M.** (2009, April). Children's academic task value differentiation: The influence of grade level, native language and language of instruction. Poster session presented at the biannual meeting of the *Society for Research in Child Development*, Denver.
- Black, J. M.,** Nagamine, M., Reiss, A. L., Gabrieli, J. D. E., Hoeft, F. (2009, March). Morphometric and functional neuroanatomy of rapid naming, phonological processing and word identification in children with a wide range of reading ability: Implications for the double-deficit hypothesis of developmental dyslexia. Poster session presented at the annual meeting of the *Cognitive Neuroscience Society*, San Francisco.

- Black, J. M.**, Ho, C., Zakerani, N., Heitzmann, J., Reiss, A. L., & Hoeft, F. (2008, August). Reading and gender: Outcomes of typical and dyslexic adolescent readers. Poster session presented at the annual meeting of the *American Psychological Association*, Boston.
- Ho, C., **Black, J. M.**, Heitzmann, J., Zakerani, N., Reiss, A. L., & Hoeft, F. (2008, August). Predictors of reading gains in adolescents with dyslexia. Poster session presented at the annual meeting of the *American Psychological Association*, Boston.
- Black, J. M.**, Ho, C. S., Heitzmann, J., Zakerani, N., Reiss, A. L., & Hoeft, F. (2008, June). Differential associations with socioeconomic status and brain activation in dyslexic versus typical adolescent readers. Poster session presented at the annual meeting of the *Organization for Human Brain Mapping*, Melbourne, Australia.
- Ho, C. S., Gantman, A., **Black, J. M.**, Heitzmann, J., Zakerani, N., Reiss, A. L., & Hoeft, F. (2008, June). Neuroanatomical correlates of reading development in adolescents with dyslexia: A longitudinal study. Poster session presented at the annual meeting of the *Organization for Human Brain Mapping*, Melbourne, Australia.
- Zakerani, N., McCandliss B., Ho, C., Heintzman, J., **Black, J. M.**, Ojo, X. R., Reiss, A. L., Hoeft, F. (2008, April). Predicting gains in reading abilities using diffusion tensor imaging (DTI) in adolescents with dyslexia. Poster session presented at the annual meeting of the *Cognitive Neuroscience Society*, San Francisco.
- Black, J. M.** (2008, March). Through the lens of language: Exploring intelligence beliefs among dual-language and English-only students. Poster session presented at the annual meeting of the *American Educational Research Association*, New York.
- Black, J. M.** (2008, March). Global or differentiated? Examining the factor structure of intelligence beliefs by academic subject and language. Poster session presented at the annual meeting of the *American Educational Research Association*, New York.
- Black, J. M.**, Maeda, F., Taylor, H., Kolchugina, G., Faizi, A., Martindale, J., McMillion, G., Hernandez, A., Meyler, A., & Gabrieli, J. D. E. (2005, April). Combined neuroimaging (fMRI, VBM and DTI) and psychophysical evidence of dyslexia in an adolescent population. Poster session presented at the annual meeting of the *Cognitive Neuroscience Society*, New York.
- Black, J. M.** (2005, April). Fit to belong: Self-esteem in context. Poster session presented at the annual meeting of the *American Educational Research Association*, Montreal, Canada.
- Black, J. M.** (1999, April). A cultural perspective of the relationship between gender and math achievement. Poster presented at the *Western Psychology Conference for Undergraduate Research*, Santa Clara, CA.

#### **PROFESSIONAL SERVICE: REVIEWER**

*Brain Structure and Function; The Open Medical Imaging Journal; The Journal of Biological Psychiatry; Neuropsychologia*

## PROFESSIONAL AFFILIATIONS

*American Educational Research Association; American Psychological Association; Association for Psychological Science; Cognitive Neuroscience Society; International Dyslexia Association; International Reading Association; Organization for Human Brain Mapping; Society for Neuroscience; Society for Research in Child Development; Society for Scientific Study of Reading*

## OTHER AFFILIATIONS

Board Member, Stanford Pride, Stanford University LGBT Alumni Organization  
Steering Committee Member, Cardinal Young Alumni, Stanford University

## GRANTS

### Ongoing Research Support

Reiss (PI)

Application Years: 2008, 2009

NIH Research Training Grant (T32)

Center for Interdisciplinary Brain Sciences Research

Training in multi-modal neuroimaging, data acquisition and analyses, study design, primarily related to cognitive functions in children.

Role: Postdoc, Supervisor: Dr. Allan L. Reiss

### Completed Research Support

Black (PI)

Application Year: 2007-2008

Spencer Research Training Grant

Academic Self-Concept, Subjective Task Value, and Beliefs about Intelligence in Dual-Language and English-Only Elementary School Students

The goal of this study was to examine the achievement motivation-related self-perceptions of students enrolled either in dual language or in English-only instructional programs to determine the extent to which current theories hold for a linguistically diverse population.

Role: PI, Dissertation Advisor: Dr. Deborah Stipek