

**TIFFANY R. LEE**  
**CURRICULUM VITAE**

Learning Sciences, College of Education  
University of Washington  
45<sup>th</sup> Street Plaza, Box 354941  
Seattle, WA 98195  
Tel: (206) 940-5405  
Fax: (206) 221-0610  
Email: tlee13@u.washington.edu  
Webpage: <http://students.washington.edu/tlee13>

**EDUCATION**

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**Ph.D. in Learning Sciences, College of Education** **To be completed Fall 2009**  
**University of Washington**

Dissertation Title: Exploring Young Children's Developing Conceptions of Science and Scientists (working title)

Doctoral Committee: John D. Bransford (Co-Chair, Learning Sciences), Philip Bell (Co-Chair, Learning Sciences), Leslie R. Herrenkohl (Human Development and Cognition), Miriam Bassok (Cognitive Psychology)

**B.A. in Child Development with a Minor in Psychology** **May 2004**  
**California State University, Chico**

Cum Laude and Honors in the Major

Honors Research Project: Young Children's Comprehension of Stories: Computer vs. Personal Instruction

Supervisor: Melissa M. Groves (Child Development)

**RESEARCH INTERESTS**

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My research interests lie at the intersection of *child development* (i.e., focusing on the learning and development of young children through age 8), *science education* (i.e., what, where, when, and how young children learn about science; implications for learning and teaching in school and everyday contexts), and *learning sciences* (i.e., using socio-cultural theories of learning and mixed methods to better understand how people learn across time and settings).

**RESEARCH AND GRANT SUPPORT**

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Co-Principal Investigator of the "2009 inter-Science of Learning Centers (iSLC) Conference."  
Funded by the National Science Foundation, 10/08-09/09, \$100,000. (PI: John Bransford)

Recipient of the Undergraduate Research and Creativity Grant. Funded by the California State University, Chico, 08/03-05/04, \$500.

**RESEARCH EXPERIENCE**

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**The LIFE (Learning in Informal and Formal Learning) Center** **Summer 2006 - Present**

Graduate Researcher, University of Washington

Research assistant on two separate areas of research. First, working in partnership with a local school district to better align the district's K-12 core curriculum with learning principles outlined in *How People Learn: Brain, Mind, Experience, and School*. Worked with curriculum developers, curriculum coaches, teachers, and students to review and revise existing curriculum units. Co-designed a 5<sup>th</sup> grade science unit to model the integration of learning principles into curriculum design and implementation. Second, to investigate the effects of instructional material organized around people and the related physiological correlates of arousal and attention. Received training in the use of equipment to measure physiological responses (heart rate and skin conductance). Designed research materials, collected, coded, analyzed and interpreted data.

Supervisors: Professor John Bransford (Center Director and PI) and Dr. Nancy Vye (Center Lead)

**The LIFE (Learning in Informal and Formal Learning) Center** **Fall 2004 - Summer 2006**

Graduate Researcher, University of Washington

Involved in two research projects. First, participated in a multi-year, team ethnography of fourth and fifth graders, their families, and their peers, with a focus on the overlapping conceptual dimensions of everyday science, technology, and argumentation. Assisted with study design, development of materials, data collection, coding and analysis. Observed children and collected audio, video and fieldnote data in their school, homes and communities. Second, conducted research in collaboration with Dr. Jennifer Amsterlaw and Professor Andrew Meltzoff to investigate children's everyday influences on the development of reasoning skills.

Supervisor: Professor Philip Bell (Center Lead)

**Learning, Cognition and Instruction Research Group** **Fall 2002 - Spring 2004**

Research Assistant and Project Leader, Department of Psychology, California State University, Chico

Assisted with several research investigations, including the use metaphorical graphics to aid students' acquisition of chemistry concepts, the instructional value of metaphorical primers on students' acquisition of concepts of the U.S. Constitution (sponsored by NASA's Classroom of the Future), and the effects of hypermedia navigation and semantic relationships utilizing prior knowledge and configurational knowledge. Developed materials and collected, coded and analyzed data for presentation and publication purposes.

Supervisor: Professor Neil Schwartz

**School Readiness Evaluation** **Spring 2003 - Spring 2004**

Research Assistant, Child Development Program, California State University, Chico

Participated in research designed to determine whether kindergarten classroom activities mandated by Butte County yield higher elementary school performance. The investigation is funded by the State of California. Responsibilities included review and implementation of

assessment tools, data coding and reduction, serving as liaison between school districts and the University, and interpretation of activity-behavior correlates.

Supervisors: Professors Sandra Machida and Melissa Groves

**Self-Efficacy Evaluation****Summer 2003 - Spring 2004**

Research Assistant, Department of Education, California State University, Chico

Participated in research on self-regulated learning designed to determine the degree to which goal orientation and self-regulation are related among pre-service teachers, the extent to which these variables are related to teacher performance, and the degree to which the combination of these variables can predict the behavior of teachers relative to student academic outcomes. Responsibilities included reviewing relevant literature, data coding, reduction and analysis, and manuscript proofreading.

Supervisor: Professor Paula Selvester

**Teacher Education Evaluation****Summer 2003 - Spring 2004**

Research Assistant, Department of Education, California State University, Chico

Assisted with teacher education research to determine the variables that predict success on the Reading Instruction Competency Assessment required by the State of California for the issuance of a teaching credential. Responsibilities included data collection, coding, reduction, and analysis.

Supervisors: Professors Paula Selvester and Edward Williams

**TEACHING EXPERIENCE**

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**Early Childhood and Family Studies****September 2008 – Present**

Graduate Instructor, University of Washington

Graduate instructor for the Service Learning and Research sequence for Early Childhood and Family Studies juniors and seniors. Working in conjunction with faculty to connect students' service-learning experiences with content in other ECFS-related courses.

Supervisor: Professor Susan Sandall

**Early Childhood and Family Studies****September 2007 – June 2008**

Teaching Assistant, University of Washington

Teaching Assistant for the 2007-2008 Early Childhood and Family Studies undergraduate courses. Assisted with course development and preparation, course instruction, and grading.

Instructors: Professors Susan Sandall, Brinda Jegatheesan, and Gail Joseph

**Educational Psychology****January 2008 – March 2008**

Teaching Assistant, University of Washington

One of two Teaching Assistants for the undergraduate course, "Introduction to Educational Psychology." This interdisciplinary course was comprised of students from various departments across the University of Washington, including Early Childhood and Family Studies, Sociology, Museology, Biology, and Geography. Co-taught weekly discussion section.

Instructor: Professor John Bransford

**Child Development Lab****January 2003 – May 2004**

Student Teacher, Child Development Program, California State University, Chico

Worked in the Program's preschool lab classroom. Responsibilities included preparing and implementing lesson plans for children, documenting children's individual development over the year, assisting teachers in the classroom, and general supervision.

**UCBS Children's Center****January 2000 – June 2000**

Assistant Teacher, University of California, Santa Barbara

Worked in a preschool classroom of approximately 20 four-year old children. Led and assisted with classroom activities, prepared snacks, and supported the learning and development of children through play.

**Shadelands Special Preschool****August 1998 – June 1999**

Assistant Teacher, Concord, CA

Worked with three to five year-old children with moderate to severe mental and physical disabilities, including Cerebral Palsy, Down's syndrome, autism spectrum disorder, and other general disabilities. Helped children to improve their everyday self-help skills, fine and gross motor abilities, socio-emotional development, and to follow classroom routine.

**PEER REVIEWED PUBLICATIONS**

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Carpenter, J., Davis, J., Erwin-Stewart, N., Lee, T.R., Bransford, J., & Vye, N. (in press). Gender representation in humanoid robots for domestic use. *International Journal of Social Robotics*.

Carpenter, J., Davis, J., Erwin-Stewart, N., Lee, T.R., Bransford, J., & Vye, N. (2008). Invisible machinery in function, not form: User expectations of a domestic humanoid robot. In P. M. A. Desmet, S. A. Tzvetanova, P. Hekkert, & L. Justice (Eds.), *Proceedings of the 6th Conference on Design and Emotion*. China: School of Design, The Hong Kong Polytechnic University.

Lee, T.R., Davis, J.M., Vye, N., & Bransford, J.D. (2008). Do higher levels of arousal predict better learning? An investigation of learning and physiological responses. In P. Kirschner, J. van Merriënboer, & T. de Jong (Eds.), *Proceedings of the Eighth International Conference of the Learning Sciences (ICLS)*.

Davis, J.M., Lee, T.R., Vye, N., Bransford, J.D., & Schwartz, D.L. (2006). The role of people knowledge in learning narrative and domain content. In S. Barab, K. Hay & D. Hickey (Eds.), *Proceedings of the Seventh International Conference of the Learning Sciences (ICLS)*. Mahwah, NJ: Lawrence Erlbaum Associates.

Bell, P., Bricker, L.A., Lee, T.R., Reeve, S., & Zimmerman, H.T. (2006). Understanding the cultural foundations of children's biological knowledge: Insights from everyday cognition research. In S. Barab, K. Hay & D. Hickey (Eds.), *Proceedings of the Seventh International Conference of the Learning Sciences (ICLS)*. Mahwah, NJ: Lawrence Erlbaum Associates.

Schwartz, N.H., Verdi, M., Morris, T., Lee, T.R., & Larson, N. (2007). Navigating web-based environments: Differentiating internal spatial representations from external spatial displays. *Contemporary Educational Psychology*, 32(4), 551-568.

Schwartz, N. H., Stroud, M.J., Lee, T.R., Scott, B.M. & McGee, S. (2006). Enhancing hypermedia learning through metaphorical priming. *Journal of Educational Computing Research*, 35(1), 1-30.

#### **MANUSCRIPTS UNDER REVIEW**

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Davis, J.M., Lee, T.R., Vye, N. & Bransford, J.D. (under review). Person knowledge and pedagogical diagnoses: An initial exploration.

#### **MANUSCRIPTS IN PREPARATION**

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Lee, T.R. (in preparation). What counts as science to early elementary students? Exploring young children's developing images of science.

Lee, T.R., Davis, J.M., Vye, N., & Bransford, J.D. (in preparation). Do higher levels of arousal predict better learning? An investigation of person knowledge and physiological responses.

Bell, P., Lee, T.R., and Bricker, L.A. (in preparation). Tracing the social influences on children's development of metacognitive knowledge about thinking and learning using ethnography and experiments.

Bell, P., Zimmerman, H.T., Bricker, L.A., & Lee, T.R. (in preparation). The everyday cultural foundations of children's biological understanding in an urban, high-poverty community.

Reeve, S., Lee, T.R., and Bell, P. (in preparation). Personally relevant biology across the school day: Health, nutrition, and the local environment.

#### **CONFERENCE PRESENTATIONS**

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Lee, T.R. (2009, April). *Exploring young children's beliefs about science and scientists*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Garden Grove, CA.

Lee, T.R. (2009, April). *Exploring young children's images of science and their everyday influences*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

- Bricker, L.A., Lee, T.R., Levias, S., McCarthy, L. Mertl, V., Tzou, C., & Zimmerman, H.T. (2008, June) *Using ethnography to further understandings of learning in everyday settings*. Workshop presented at the biennial meeting of the International Society for the Learning Sciences, Utrecht, Netherlands.
- Zimmerman, H.T., Lee, T.R., & Bell, P. (2007, April). *Roles in research: Understanding the form and implications of positions that researchers and research subjects employ in a cognitive ethnography*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Bricker, L.A., Amsterlaw, J., Lee, T.R., & Bell, P. (2007, April). *Connecting ethnographies and experiments: Methodological and theoretical considerations of coordinating research on metacognition from the lab and from everyday settings*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Lee, T.R., Amsterlaw, J., Reeve, S., Bell, P., & Meltzoff, A.N. (2006, April). *From world to lab and back: Relating children's understanding of thinking in everyday and experimental contexts*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Bell, P., Bricker, L.A., McGaughey, M., Lee, T.R., Reeve, S., Zimmerman, H.T., & Tzou, C. (2006, April). *How children in a multicultural, low-SES community learn science across social settings*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Bell, P., Zimmerman, H.T., Bricker L., & Lee, T.R. (2006, April). *The everyday cultural foundations of children's biological understanding in an urban, high-poverty community*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Reeve, S., Lee, T.R. & Bell, P. (2006, April). *Health, nutrition, and the local environment*. Paper presented at the annual meeting of the National Association of Research on Science Teaching, San Francisco, CA.
- Lee, T.R., Amsterlaw, J., Reeve, S., Bell, P., & Meltzoff, A.N. (2005, October). *From world to lab and back: Relating children's understanding of thinking in everyday and experimental contexts*. Poster presented at the biennial meeting of the Cognitive Development Society, San Diego, CA.
- Zimmerman, H.T., Lee, T.R., Bell, P., Bricker, L.A., Reeve, S., & McGaughey, M. (2005, May). *Studying the development of technological fluencies from children to young adults*. Poster presented at the Pressing Questions of the Information Age 2005 Poster Session, Digital Media Working Group, University of Washington, Seattle, WA.

Schwartz, N.H., Stroud, M.J., Lee, T.R., Scott, B.M. & McGee, S. (2005, August). *Enhancing hypermedia learning through metaphorical priming*. Paper presented at the annual meeting of the European Association for Research on Learning and Instruction, Nicosias, Cyprus.

Schwartz, N.H., Stroud, M.J., Hong, N., Lee, T.R., Scott, B.M., & McGee, S.M. (2005, April). *Summoning prior knowledge: The influence of metaphorical priming on learning in a hypermedia environment*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Scott, B., Lee, T.R. & Schwartz, N.H. (2005, April). *Navigational spatial displays: The role of metacognition on cognitive load*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Bell, P., Bricker, L.A., Lee, T.R., McGaughey, M., Reeve, S. & Zimmerman, H.T. (2005, April). *Developing a framework for how students learn science through everyday and school encounters with science*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.

Schwartz, N.H., Verdi, M., Larson, N., Lee, T.R., & Rittschof, K. (2004, April). *The role of configurational knowledge in learning from maps and text*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.

#### PROFESSIONAL ASSOCIATION / ORGANIZATION SERVICE

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Proposal Reviewer for the 2008 American Educational Research Association (AERA) conference

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#### UNIVERSITY SERVICE

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**The LIFE (Learning in Informal and Formal Learning) Center** **April 2006 – February 2009**

Member of the LIFE Student Leadership Group (SLG), University of Washington

One of five members on a cross-institution, interdisciplinary advisory board for The LIFE Center. The SLG represents the student and postdoctoral scholar community within the Center, regularly communicates with the LIFE management team and NSF representatives and is responsible for maintaining a budget and organizing events specifically for students and postdoctoral scholars.

**2009 inter-Science of Learning Centers (iSLC) Conference** **March 2008 – February 2009**

Co-chair of the 2009 iSLC Conference, University of Washington

Co-chair of the 2009 iSLC Conference for students and postdoctoral scholars from the six NSF-funded Science of Learning Centers (SLCs), to be held in February 2009, at the University of Washington. Responsibilities include working in conjunction with student

conference representatives from the other Centers, obtaining external funding for the event, overseeing the conference budget, organizing conference activities, and reviewing paper and workshop proposals.

**2008 inter-Science of Learning Centers (iSLC) Conference** **April 2007 – February 2008**

Member of the 2008 iSLC Conference Planning Committee, University of Washington

Member of the 2008 iSLC Conference Planning Committee on behalf of The LIFE Center.

This first annual student and postdoctoral scholar conference was hosted by the Pittsburgh Science of Learning Center (PSLC) in February 2008. Responsibilities included working in conjunction with student conference representatives from the other Centers, obtaining external funding for the event, organizing travel details for LIFE participants, and reviewing paper and workshop proposals.

**Early Childhood and Family Studies Faculty Search Committee** **January 2007 – April 2007**

Student Member of the 2007 ECFS Faculty Search Committee, University of Washington

Member of the 2007 Early Childhood and Family Studies (ECFS) Faculty Search Committee in the College of Education. Reviewed applicants' materials, attended job talks, and organized and participated in student meetings with prospective faculty members.

**University Affairs Council, Associated Students** **August 2003 – May 2004**

Undergraduate Representative, California State University, Chico

Undergraduate Representative for the College of Behavioral and Social Sciences. This council is responsible for proposing and developing reform in university affairs, communicating between administration, faculty and student body in the area of university affairs, and helping to establish student representation on department level and curriculum committees.

**COMMUNITY SERVICE**

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**Community Action Volunteers in Education (CAVE)** **August 2003 – May 2004**

Director of Kids' Programs, Associated Students of California State University, Chico

Led and supervised twelve different volunteer programs designed for children in the community. Responsibilities included working with numerous staff to ensure the productivity of programs, enrolling university students into the program, overseeing students at their service learning sites, meeting with community partners to discuss changes and improvements, and problem solving. Also served as a member of the Steering Committee with other program directors.

**Boys and Girls Club of Chico** **August 2002 – March 2003**

Tutor, Chico, CA

Worked in the Club's Power Hour (study hall) room and helped children with various scholastic needs while specifically targeting four at-risk students to achieve and maintain educational goals. Also provided assistance for the American Sign Language program and SMART Girls, a program designed to encourage healthy lifestyles and attitudes for adolescent girls.

**HONORS AND AWARDS**

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Outstanding Student Research Award, California State University, Chico, 2004  
Member and Secretary, Psi Chi, California State University, Chico, 2003-2004  
Member, Child Development Honors Program, California State University, Chico, 2003-2004  
Member, Child Development Student Association, California State University, Chico, 2002-2004  
Member and President, Golden Key International Honour Society, California State University, Chico, 2003-2004

**PROFESSIONAL AFFILIATIONS**

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American Educational Research Association (AERA)  
International Society of the Learning Sciences (ISLS)  
National Association for the Education of Young Children (NAEYC)  
National Association for Research in Science Teaching (NARST)  
National Consortium for Instruction and Cognition (NCIC)  
Society for Research in Child Development (SRCD)

**REFERENCES**

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Professor John D. Bransford (Co-Chair)  
Shauna C. Larson Endowed Chair in Learning Sciences  
Director of The LIFE (Learning in Informal and Formal Environments) Center  
Professor of Education and Psychology  
College of Education  
University of Washington  
45<sup>th</sup> Street Plaza, Box 354941  
Seattle, WA 98195  
Tel: (206) 616-4480  
Fax: (206) 221-0610  
Email: bransj@u.washington.edu

Professor Philip Bell (Co-Chair)  
Geda and Phil Condit Professorship in Math and Science Education  
Director of the UW Institute for Science and Mathematics Education  
Associate Professor of the Learning Sciences  
College of Education  
University of Washington  
312 Miller Hall, Box 353600  
Seattle, WA 98195  
Tel: (206) 221-3642  
Fax: (206) 616-6311  
Email: pbell@u.washington.edu

Professor Susan Sandall  
Director of the Early Childhood and Family Studies Program  
Associate Professor of Special Education  
College of Education  
University of Washington  
102 Miller Hall, Box 353600  
Seattle, WA 98195  
Tel: (206) 221-3445  
Fax: (206) 616-8177  
Email: ssandall@u.washington.edu

Dr. Nora Sabelli  
Senior Science Advisor, Center for Technology in Learning  
Co-PI of The LIFE (Learning in Informal and Formal Environments) Center  
SRI International  
BN 371, 333 Ravenswood Avenue  
Menlo Park, CA 94025  
Tel: (650) 859-3599  
Fax: (650) 859-4605  
Email: nora.sabelli@sri.com