

# CURRICULUM VITAE

## Junlei Li

*Project Director/Postdoctoral Fellow*

Lesson Planning for Inquiry in Urban Schools  
Department of Psychology  
Carnegie Mellon University  
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### EDUCATION

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- Carnegie Mellon University* Pittsburgh, PA  
**Ph.D. Psychology** **2001 - 2003**  
Learning, cognition, and development as applied in K-12 instructional settings.
- Carnegie Mellon University* Pittsburgh, PA  
**M.A. Instructional Science** **1999 - 2001**  
Instructional design and evaluation of technology-based curriculum in K-12 school settings.
- University of Notre Dame* South Bend, IN  
**B.S. Computer Science** **1992 - 1995**  
Sum Cum Laude

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### ACADEMIC RESEARCH EXPERIENCE *Carnegie Mellon University*

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- Project Director and co-PI*** **2003 - present**  
Leading a three-year project (funded by the U.S. Department of Education) to examine the impact of science education policy and improve science achievement in underserved urban schools. Developed a participatory research model by teaching side by side with urban school teachers in classrooms. Built a collaborative community of researchers, teachers, and school administrators to empower urban minority students to narrow the science achievement gap and develop meaningful participation in science and in school.
- Dissertation Research*** **2001 - 2003**  
Investigated and evaluated the use and efficacy of collaborative/group learning strategies in elementary/middle school science classrooms. Recipient of 2003 American Psychological Association's Dissertation Award.
- Education Manager*** **1999 - 2001**  
Led the instructional design, implementation, deployment, and evaluation of two interdisciplinary projects in 20 schools for over 1,800 students, supported by NASA, Heinz, Buhl, Grable, and other funders. Brought together expertise in robotics, science, design, software engineering, and classroom instruction to make remote NASA missions immersive and collaborative experiences in classrooms.

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**PROFESSIONAL ADMINISTRATIVE EXPERIENCE**

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***Global Service Manager* 1995 - 1999**

Managed worldwide Internet and E-Commerce services for Procter & Gamble Co., serving over 100,000 employees in four regions (North and South Americas, Europe, and Asia). Directly supervised a headquarter team (6 – 10) and coordinated across four regional operation centers. Responsible for budget (\$6MM annually), staff development, supplier/customer management, policy communication, business consultations, service reporting, and the overall operation of the technology infrastructure.

***Senior E-Commerce Consultant* 1999 - 2001**

Retained by Procter & Gamble Co. (while in graduate school) to provide ongoing consultations to integrate legacy mainframe systems with internet commerce for the company's first business-to-business E-Commerce portal.

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**GRANTS & AWARDS**

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**U.S. Department of Education, Cognition and Student Learning Program**  
(*funded and current*) 3-year, \$750,000 grant for project 2003 – 2006  
“From cognitive models of reasoning to lesson planning for inquiry”, Director and co-PI (with David Klahr)

**American Psychological Association**  
(*awarded*) Dissertation Research Award, \$1,000 2003  
(*awarded & nominated*) Travel Grant, \$1,000, Young Scientist to the 28<sup>th</sup> International Congress of Psychology, Beijing, China 2004

**Spencer Foundation/RAND Corporation Fellowship** 2003  
(*awarded*) 2-year fellowship in educational policy research, declined due to prior commitment to project grant

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**OTHER GRANT WRITING CONTRIBUTIONS**

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**U.S. Department of Education, Cognition and Student Learning Program**  
(*proposed*) 3-year, \$1,500,000 grant for project “Training in Experimental Design”, Director and co-PI (with David Klahr) 2006

**U.S. Department of Education, Institute of Education Sciences**  
(*funded*) 5-year, \$5,000,000 grant for “Program in Interdisciplinary Education Research”, contributing grant writer, lecturer, and curriculum committee member 2004

**National Science Foundation, Instructional Materials Development Program**  
(*not awarded*) My first and most valuable learning experience as a grant writer 2000

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## ACADEMIC TEACHING EXPERIENCE

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***Disciplined Inquiry & Research Seminar*** – a required master-level, two-term course to help MAT interns in urban schools develop evidence-based teaching portfolios. **2006**

(School of Education, University of Pittsburgh)

***Research Methods in Developmental Psychology*** – a required senior-level course to help students acquire and apply basic experimental methods in developing and executing research studies involving children. **2005**

(Department of Psychology, Carnegie Mellon University)

***Scientific Research in Education*** – a required graduate-level course to engage interdisciplinary educational researchers in analyzing research methods, intervention, and policy in education. Course co-planner and frequent guest lecturer. **2004**  
**2005**

(Program in Interdisciplinary Education Research [PIER], CMU)

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## OTHER TEACHING EXPERIENCE

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***Diocese of Pittsburgh Urban Schools*** – taught science regularly in three urban schools, grades 5 through 8, as part of a researcher-teacher participatory model. Coordinated and facilitated bi-weekly “lesson study” meetings with collaborating teachers throughout the school years. Organized week-long planning sessions with collaborating teachers during summers. **2003 - present**

***Teacher Workshops*** – organized and taught numerous teacher professional development workshops under various research projects, involving public, private, charter school teachers in suburbs and urban areas, on academic subject areas ranging from robotics, science, curriculum development, research to practice, science standards, lesson planning, data analysis, and standardized tests. **1999 - present**

***Procter & Gamble Co.*** – designed, taught, and certified operation support staff for Internet and E-Commerce services; presented service and policy issues at corporate conferences. **1996 – 2001**

***University of Notre Dame*** – served as instructor or teaching assistant for undergraduate courses including physics and computer programming. **1991 – 1995**

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## PUBLICATIONS

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### ***Refereed Journal Papers***

- Li, J., Klahr, D., & Siler, S. (2006). What lies beneath the science achievement gap? The challenges of aligning science instruction with standards and tests. *Science Educator*, 15 (1).
- Klahr, D. & Li, J. (2005) Cognitive Research and Elementary Science Instruction: From the Laboratory, to the Classroom, and Back. *Journal of Science Education and Technology*, 14 (2).

### ***Book Chapters***

- Li, J. & Klahr, D. (2006). The Psychology of Scientific Thinking: Implications for Science Teaching and Learning. In J. Rhoton & P. Shane (Eds.) *Teaching Science in the 21st Century*. National Science Teachers Association and National Science Education Leadership Association: NSTA Press.
- Li, J. (in press). Anderson's ACT Theory and Its Educational Implications. In Pi, L. (Eds.) *Chinese Encyclopedia of Education: Psychology*. Shanghai Education Press.

### ***Refereed Paper in Conference Proceedings***

- Li, J., Klahr, D., & Jabbour, A. (2006). When the rubber meets the road: Putting research-based methods to test in urban classrooms. *Proceedings of the seventh international conference of the learning sciences: Making a difference*. Mahwah, NJ: Erlbaum.

### ***Refereed Conference Papers and Symposiums***

- Klahr, D. & Li, J. (accepted). *Cognitive Science Serving Education in the Public Interest: Moving from the Lab to the Field and Back Again*. Symposium at American Psychological Science 2006 Annual Meeting, New York
- Siler, S. A. & Li, J. (accepted). *African-American late-elementary-school students: Can their motivational patterns be explained by Dweck and Leggett's model of motivation?* Poster session to be presented at the Annual Meeting of the American Educational Research Association, 2006, San Francisco
- Siler, S. A. & Li, J. (accepted). *Stereotype threat: Does it hurt the science achievement test performance of African-American and female 6th-graders?* Poster session to be presented at the Annual Meeting of the American Educational Research Association, 2006, San Francisco
- Klahr, D., Cary, M., Li, J. & Siler, S. (2005). *Traversing the interface between basic research and classroom in elementary science education*. Symposium on Bridging Cognitive Development and Education, Cognitive Development Society Fourth Biennial Meeting, San Diego
- Li, J. & Klahr, D., (2004). *From psychology laboratory to urban classrooms: the training and transfer of the control of variable strategy*. Poster presented at the 28<sup>th</sup> International Congress of Psychology, Beijing, China

- Li, J. (2004). *Exploring Collaborative Discovery* Paper presented at the 28<sup>th</sup> International Congress of Psychology, Beijing , China
- Li, J. & Hayes, J., (2003). *Do Collaborating Individuals Learn, as well as They Perform?* Paper presented at American Education Research Association 2003, Chicago
- Li, J. (2003) *Bridging Collaborative Performance and Individual Learning*. Dissertation research presented at Computer Support for Collaborative Learning Conference 2003, Norway
- Coppin, P., Wagner, M., & Li, J. (2001) Collective intelligence via robotic communication. In *Systems, Social and Internationalization Design Aspects of Human-Computer Interaction*. Lawrence Erlbaum Associates, Inc.
- Coppin, P., Pell, R., Wagner, M., Hayes, J., Li, J., Hall, J., Fischer, K., Hirschfield, D., & Whittaker, R. (2000) *EventScope: Amplifying Human Knowledge and Experience via Intelligent Robotic Systems and Information Interaction*. IEEE International Workshop on Robot-Human Interaction, Osaka, Japan

#### ***Other Non-refereed Invited Presentations***

- A two-pronged coping strategy for urban science education*, Institute of Education Sciences Conference, U.S. Department of Education, 2006
- Cognitive science meets urban schools*, Institute of Education Sciences Principal Investigators' Meeting, U.S. Department of Educations, 2004, 2005
- A mile-wide, mile-Deep dilemma in science education*, EdBag seminar series, Program of Interdisciplinary Educational Research, Carnegie Mellon University, 2006
- How to cope with science standards and testing*, Principals' Meeting, Diocese of Pittsburgh Schools, 2005
- A case study in urban science education*, Supergroup seminar series, Learning Research and Development Center, University of Pittsburgh, 2005
- Lesson planning for inquiry*, Supergroup seminar series, Learning Research and Development Center, University of Pittsburgh, 2004
- From Mars to classrooms*, NASA Learning Technologies Conference at Glenn Space Center and Jet Propulsion Laboratory, 2000 and 2001

#### ***Other Non-refereed Professional Writing***

- Project Annual Reports to Institute of Education Sciences, 2003-2005, [www.psy.cmu.edu/lessonplans](http://www.psy.cmu.edu/lessonplans)
- EventScope Mission to Mars Curriculum, 2000-2001, [www.eventscope.org](http://www.eventscope.org)
- BigSignal Exploring Antarctica Curriculum, 1999-2000, [www.bigsignal.net](http://www.bigsignal.net)
- Procter & Gamble Co., Internet and E-Commerce Service Support Manuals, Policy, Annual Reports, Certification Courses, 1996 – 2001, proprietary documents.

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## PROFESSIONAL SERVICES AND SELECTED CONSULTATIONS

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- Reviewer**, American Education Research Association Conferences 2003 and 2005, International Conference of Learning Sciences, 2006
- Member and Grant Writer**, Pennsylvania CAN, a coalition of researchers and practitioners (led by Dr. Jerome Taylor, University of Pittsburgh) aiming to close the black/white achievement gap in Pittsburgh Public Schools, 2005 – present
- President**, Association of Computer Machinery, University of Notre Dame Chapter, 1993 – 1995
- Secretary**, Tau Beta Pi Engineering Honor Society, University of Notre Dame Chapter, 1994 – 1995
- Consultation**, with Beth Ann Bryan, Senior Advisor to the U.S. Secretary of Education, to improve science education and assessment for the state of Texas, 2006
- Consultations**, with Harry Faulk, Associate Dean of Heinz School, Carnegie Mellon University, to improve course design for Masters of Public Management Program and the evaluation of technology-based K-12 interventions, 2003
- Consultations**, with Eberly Center for Teaching Excellence, Carnegie Mellon University, to redesign University Faculty Course Evaluations, 2002

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## VOLUNTEER AND COMMUNITY SERVICES

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- Firefighter** (2005 – present), serving in fire, rescue, and community events. Station 122, Churchill, PA
- President and Instructor** (2000 – 2002), managed and served Carnegie Mellon University Ballroom Dance Association with 100 to 300 annual members of students, faculty, and community members, showcases for university and community events, hosting intercollegiate competitions. Pittsburgh, PA
- Division Chair and Judge** (2003 – present), served intermediate behavioral science division, SciTech Festival Science Fair Competition, Charles Drew Science Fair, and various local school science fairs. Pittsburgh, PA
- Enrichment Program Instructor** (2000 – 2005), taught the Pittsburgh Urban League Charter School for elementary school urban minority students, Carnegie Mellon Institute for Talented Elementary and Secondary Students science program, and St. James of Wilksburg after-school program for science fair exhibits. Pittsburgh, PA
- Program Coordinator and Instructor** (1996 – 1999), managed and served Cincinnati Recreation Commission Ballroom Dance Program for youth and senior citizens and various dance programs for children and adolescents in school, church, and community settings. Cincinnati, OH
- Portrait Artist** (summer, 1994), served at the Daisy's Resource and Development Center in a program designed to raise self-image awareness for pregnant or delinquent adolescent females in transition to independence. North Chicago, IL
- Volunteer**, regularly visited family-less nursing home residents through a University of Notre Dame service program; tutored at city homeless shelter. South Bend, IN