

# SHARIN RAWHIYA JACOB

PHD IN EDUCATION CANDIDATE  
UNIVERSITY OF CALIFORNIA, IRVINE

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## EDUCATION

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2017-present	<b>University of California, Irvine</b> Ph.D. in Education Candidate	Irvine, CA
2013 – 2015	<b>Cal State LA</b> M.A. in Teaching English to Speakers of Other Languages	Los Angeles, CA
2004 – 2005	<b>San Diego State University</b> Single Subject (English) Teaching Credential	San Diego, CA
1999 – 2003	<b>San Francisco State University</b> B.A. in Philosophy	San Francisco, CA

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## PUBLICATIONS

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### Publications and Proceedings

Jacob, S., Montoya, J., Nguyen, H., Richardson, D., & Warschauer, M. (conditional acceptance). Examining the What, Why, and How of Multilingual Student Identity Development in Computer Science. *ACM Transactions on Computing Education*.

Jacob, S. R., Parker, M., & Warschauer, M. (in press). Integration of Computational Thinking into English Language Arts. *ACM Special Issue on K-5 Computational Thinking*.

Montoya, J., Jacob, S. R., & Warschauer, M. (in press). Exploring multilingual students gender identities in computer science education. *Teachers College Record*.

Prado, Y., Jacob, S., & Warschauer, M. (2021). Teaching computational thinking to exceptional children: Lessons from two inclusive classrooms. *Computer Science Education*.

Kamhi-Stein, L. D., Jacob, S. R., Herrera, A., & Seaborne, R. (2021). Linking a community-based ESL program with the MA in TESOL practicum course: The tale of a program. *CATESOL Journal*.

Zhou, N., Chao, Y., Jacob, S., & Richardson, D. (2020). Teacher perceptions of equity in high school computer science classrooms. *ACM Transactions on Computing Education*, 20(3), pp. 1-27.

Jacob, S. R., Nguyen, H., Garcia, L., Richardson, D., & Warschauer, M. (2020). Teaching computational thinking to multilingual students through inquiry based learning: A cross-case analysis. *Proceedings of the IEEE Annual International Conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT'20)*.

Nguyen, H., Garcia, L., Jacob, S. R., Richardson, D., & Warschauer, M. (2020). Classroom Use of Discourse-Rich Tools to Promote Computational Thinking. *Proceedings of the IEEE Annual International*

*Conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT'20).*

Nguyen, H., Garcia, L., Jacob, S., & Warschauer, M. (2020). Reflection as formative assessment of computational thinking in elementary grades. *Proceedings of the International Conference on the Learning Sciences (ICLS'20).*

Jacob, S. R., & Warschauer, M. (2018). Computational thinking and literacy. *Journal of Computer Science Integration, 1*(1), 1-19.

Jacob, S., Nguyen, H., Tofel-Grehl, C., Richardson, D., & Warschauer, M. (2018). Teaching computational thinking to English learners. *NYS TESOL Journal, 5*(2), pp. 12-24.

## **Chapters in Books**

Jacob, S. R., Montoya, J., & Warschauer, M. (in press). Examining identity performance of multilingual students in computer science education: An ethnographic case study. In G. Kessler (Eds.), *Identity, multilingualism, and CALL*. CALICO Book Series: Advances in CALL Research and Practice.

Jacob, S. R., Garcia, L., & Warschauer, M. (2020). Engaging multilingual identities in computer science education. Freiermuth, M. R. Editor & Zarrinabadi, N. Editor (Eds.), *Technology and the Psychology of Second Language Learners and Users*. Palgrave-Macmillan. [https://doi.org/10.1007/978-3-030-34212-8\\_12](https://doi.org/10.1007/978-3-030-34212-8_12)

Jacob, S., Maamujav, U., & Warschauer, M. (2020). Online Englishes. In A. Kirkpatrick (Ed.), *The Routledge Handbook of World Englishes*. New York: Routledge.

## **Reports**

Jacob, S. R., Bailey, A., Bers, M. U., Burke, Q., Denner, J., Franklin, D.... Warschauer, M. (2021). Computer science for multilingual students: Report of the AERA Educational Research Conference. American Educational Research Association.

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## **WORKS IN PROGRESS**

### **Under Review**

Jacob, S., Lee, O., Gomez-Zwiep, S., & Warschauer, M. (under review). Computational thinking, language, and literacy. *Educational Researcher*.

Muhlenberg, D., Zou, A., Jacob, S. R., Richardson, D., & Warschauer, M. (under review). Exploring how gender stereotypes influence computer science identity development in multilingual students. *Journal of Computer Science Integration*.

Kamhi-Stein, L. D., & Jacob, S. R. (under review). Toward a framework for adapting an interactive face-to-face teacher preparation course to remote instruction: Lessons from COVID-19. In V. Dennen, Dickson-Deane, C., Ge, X., Ifenthaler, D., Murthy, S., Richardson, J. C. (Eds.), *Global perspectives on educational innovations for emergency situations*. Springer

## **Books**

Jacob, S. R., & Warschauer, M. (proposal under review). *Teaching computer science to multilingual students*. Teachers College Press.

## **In Preparation**

### **Publications and Proceedings**

Jacob, S., Franklin, D., & Warschauer, M. (in preparation). Discourse analysis of multilingual students' computational thinking artifact-based interviews.

Jacob, S., Parker, M., Salac, J., Franklin, D., & Warschauer, M. (in preparation). Exploring learning relationships between computational thinking assessments developed for multilingual students.

Jacob, S., Montoya, J., & Warschauer, M. (in preparation). Exploring multilingual student's development of computational thinking practices.

Garcia, L., Jacob, S., Denner, J., Bhattacharya, D., Peterfreund, A., & Richardson, D. (in preparation) Using Research-Practitioner Partnership to implement computer science education in K-12.

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### **SELECTED PRESENTATIONS**

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Kamhi-Stein, L., Ashtari, N., Issagholian, N., Maamuujav, U., Lao, R., & Jacob, S. R. (2022). Advances in technology for language teacher preparation (panel). TESOL 2022 International Convention.

Vogel, S., Hoadley, C., Carroll-Miranda, J., & Jacob, S. R. (2021). Multilingual student resources for equitable K-12 computer science instruction (invited panel). ACM, CMDiT Tapia Conference. Virtual.

Jacob, S. R., Vogel, S., Pozos, R., Ordonez Franco, P., & Ryoo, J. (2021). Leveraging multilingual students' resources for equitable computer science instruction (panel). IEEE Annual International Conference on Research on Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT'21).

Jacob, S. (2021). American Education Research Association conference on Computational Thinking for Multilingual Students. Computational Thinking, Language, and Literacy (Paper Presentation). (virtual conference)

Montoya, J., Jacob, S., & Warschauer, M. (2021, April) To what extent are elementary teachers using universal design for learning? (Roundtable). American Education Research Association (virtual conference).

Jacob, S. R., Prado, Y., & Warschauer, M. (November, 2020). Teaching computational thinking to exceptional learners: Lessons from two diverse classrooms [Paper Presentation]. International Society for Technology in Education. (ISTE).

Jacob, S. (October, 2020). Exploring identity enactment of multilingual students in computer science. CATESOL Annual Conference.

Prado, Y., Jacob, S. R., & Warschauer, M. (April, 2020). Teaching Computational Thinking to Exceptional Learners: Lessons from Two Diverse Classrooms Using Scratch [Poster Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/v8sw7zq> (Conference Canceled)

Jacob, S. Teaching computational thinking to multilingual students through inquiry based learning: A cross-case analysis. (October, 2019). California Teachers of English to Speakers of Other Languages '19 (CATESOL) Annual Conference, San Jose, CA.

Zhou, N., Cao, Y., Jacob, S., Richardson, R., & Warschauer, M. (April, 2019). Paper Presentation. High

school teachers' understanding of equity in computer science classrooms [Roundtable]. AERA Annual Meeting Toronto, CA.

Jacob, S. (April, 2019). Engaging multilingual identities in computer science education. California Teachers of English to Speakers of Other Languages (CATESOL) Los Angeles, Regional Conference, Los Angeles, CA.

Jacob, S., (March, 2019). Examining the implementation of computational thinking for multilingual students: A mixed methods study. Teachers of English to Speakers of Other Languages '19 (TESOL) International Conference, Atlanta, GA.

Jacob, S., Nguyen, H., & Garcia, L. (February, 2019). Poster Presentation. Developing a computational thinking curriculum for multilingual students: A Research Practice Partnership. RESPECT 2019, IEEE Special Technical Community on Broadening Participation, Baltimore, MD.

Garcia, L., Jacob, S., & Nguyen, H. (February, 2019). 10-hour Workshop. Research methods for female undergraduates in computing. Google ExploreCSR Workshop, Long Beach, CA.

Jacob, S. (December, 2018). David E. Eskey Award Presentation. Computational thinking for multilingual students. California Teachers of English to Speakers of Other Languages '19 (CATESOL) Annual Conference, Anaheim, CA.

Jacob, S., & Warschauer, M. (April, 2018). Poster Presentation. A three dimensional framework for exploring the relationship between computational thinking and literacy. University of California, Irvine: Digital Learning in the Humanities and Beyond Symposium, Irvine, CA.

Jacob, S., & Warschauer, M. (March, 2018). Poster Presentation. Computational Thinking and Literacy. University of California, Los Angeles: Center for Language, Interaction, and Culture '18 Conference. Los Angeles, CA.

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## TEACHING

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Graduate	Co-teacher, TESL 5680 – Teaching Practicum. California State University, Los Angeles. Spring 2021.
Graduate	Co-teacher, TESL 5620 – Methods for Teaching Second Languages. California State University, Los Angeles. Spring 2021.
Graduate	Co-teacher, TESL 5650 – Using Computers in the Language Classroom. California State University, Los Angeles. Fall 2020.
Graduate	Instructor of Record, TESL 5620 – Methods for Teaching Second Languages. California State University, Los Angeles. Spring 2020.

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## HONORS AND AWARDS

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10/2017	David E. Eskey Memorial Award in recognition of "outstanding contribution promoting computational thinking for English learners", CATESOL, \$500
03/2021	UCI Grad Slam (3 minute thesis competition) Finalist

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## FELLOWSHIPS

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5/2021	Cal State University Chancellor's Doctoral Incentive Program Dissertation
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	Fellowship, \$5,000
4/2021	Haynes Lindley Doctoral Dissertation Fellowship, \$20,000
11/2020	University of California Irvine Public Impact Distinguished Fellowship, \$12,000
5/2019	California State University Chancellor's Doctoral Incentive Program Scholars' Program Recipient, CSU Chancellor's office, Forgivable Loan, \$30,000

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## REFEREEING, EDITORIAL, AND PROFESSIONAL ACTIVITIES

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**Refereeing:** ACM Transactions on Computing Education, Computer Science Education, Journal of Computer Science Integration, IEEE Special Technical Community on Broadening Participation, SIGCSE Technical Symposium on Computer Science Education, Issues in Applied Linguistics, SAGE Open, Remedial and Special Education

**Co-Editor,** *The CATESOL Journal: Special Issue on Innovative, Interactive, and Intelligent Uses of Technology in Multilingual Classrooms.* To be published Spring 2023.

Research Experience for Undergraduates Coordinator, National Science Foundation, 2020-2021

Conference Chair, American Educational Research Association Conference, Computational Thinking for Multilingual Students, April 2021

CATESOL Board Member, Editor, California Teachers of English to Speakers of Other Languages (CATESOL), April, 2020.

Founding Member, Orange County Chapter of the Computer Science Teachers Association (CSTA), August, 2018.

Section Editor, Issues in Applied Linguistics, a refereed journal run by graduate students from the Applied Linguistics department at UCLA (Feb, 2016-present)

Professional Development Coordinator, CONECTAR 2018 Summer Institute, July, 2018.

Public Relations Chair, Conference Committee, Literacies, Languages and Writing in Urban Contexts: A Symposium on Linguistic Opportunities, Hurdles, and Wealth in Our City's Schools and Communities, June 2016.

Associate Chair and Public Relations Chair, Conference Committee, Los Angeles Regional CATESOL Conference, April 2015.

President, TESOL Society, California State University, Los Angeles, 2014 - 2015. Organized workshops and academic presentations to advance professional growth in the field of TESOL.

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## GRANT WRITING ACTIVITIES

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US Department of Education, Education Innovation and Research, Improving Pedagogy to Accelerate Computational Thinking, (IMPACT), September 1, 2019 – August 31, 2024, Grant No: U411C190092, \$4,000,000.00

National Science Foundation, Computer Science for All, Research Practice Partnership, Collaborative Network of Educators for Computational Thinking for All Research (CONNECTAR), September 1, 2017 – August 31, 2020, Grant No. 1923136, \$1,600,000

American Education Research Association Conference Grant, Computational Thinking for Multilingual Students, \$30,000

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## **GRADUATE STUDENT RESEARCHER, K-12TEACHING EXPERIENCE**

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### **Graduate Student Researcher September 2019-present**

Improving Pedagogy to Accelerate Computational Thinking (IMPACT)

Institute of Education Sciences, Education Innovation and Research Program

October 1, 2019–September 30, 2022, \$4,000,000

University of California, Irvine, University of Chicago, San Francisco Unified

**Advisor:** Dr. Mark Warschauer

- Collaborate on a project to develop and evaluate a computer science instructional intervention, consisting of a curriculum and professional development, appropriate for Latinx students in fourth grade and combining three promising innovations: (1) an English language arts oriented computational thinking curriculum developed by San Francisco USD; (2) linguistic scaffolding developed by UC Irvine; and (4) CS learning scaffolding developed by University of Chicago.
- Serve as lead graduate student, iteratively co-create curricular materials, address research questions using experimental research design methodology, manage data collection and conduct data analysis, present findings at research conferences and co-author publications in peer review journals.

### **Graduate Student Researcher October 2019-present**

CONNECTAR: Collaborative Network of Grade 3-5 Educators for

Computational Thinking for English Learners

National Science Foundation, September 1, 2019–August 31, 2021, Grant No.

1923136, \$1,000,000

University of California, Irvine

**Advisor:** Dr. Mark Warschauer

- Collaborate on a Research Practitioner Partnership comprised of university and K-12 researchers and practitioners on a multi-year, NSF-funded project to test and scale a computer science curriculum for upper elementary school English Learners (grades 3-5).
- Serve as lead graduate student, iteratively co-create curricular materials, address research questions utilizing design-based research methodology, manage data collection and conduct data analysis, present findings at research conferences and co-author publications in peer review journals.

### **Graduate Student Researcher September 2017-August 2019**

CONNECTAR: Collaborative Network of Educators for *Computational*

*Thinking for All* Research

National Science Foundation, September 1, 2017–August 31, 2019, Grant No.

1738825, \$250,000

University of California, Irvine

**Advisor:** Dr. Mark Warschauer

- Collaborate on a Research Practitioner Partnership comprised of university and K-12 researchers and practitioners on a multi-year, NSF-funded project to develop and test a computer science curriculum for upper elementary school English Learners (grades 3-5).

- Serve as lead graduate student, iteratively co-create curricular materials, address research questions utilizing design-based research methodology, manage data collection and conduct data analysis, present findings at research conferences and co-author publications in peer review journals.

**Research Assistant** April 2014 to August 2017

California State University, Los Angeles

**Advisor:** Dr. Simeon Slovacek

- Facilitated activities associated with grants and contracts proposal development for faculty within the Charter College of Education (CCOE).
- Participated in grant writing teams with CCOE faculty to write grant proposals for agencies and foundations such as the US Dept. of Ed, California Commission on Teacher Credentialing, NIH, NSF, Brady Foundation and the California Community Foundation.
- Executed federal and private grantee monitoring and evaluation.
- Compiled evaluation reports including findings and recommendations which are presented to agency staff and Boards.
- Assisted with academic research including preparation and submission of manuscripts for publication.

**ESL Instructor** September 2014 to December 2015

California State University, Los Angeles

**English and English as a Second Language** August 2007 to June 2010

San Diego High School, San Diego, CA

**English as a Second Language Teacher,** August 2006 to June 2007

Samuel Gompers High School, San Diego, CA