

# TIFFANY CUNNINGHAM, PHD

## *Curriculum Vitae*

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### **EDUCATIONAL BACKGROUND**

Doctorate of Philosophy

**University of San Diego**, May 2023

School of Leadership and Education Sciences

*Specialization:* Education for Social Justice

*Dissertation:* Analysis of One Secondary School's Support Systems for Aspiring First-Generation Latinx College Students: A Case Study

*Areas of Research Interest:* students' use of home languages in science classrooms; experiences of first-generation Latinx college students during college admissions and transition processes

Master of Education

**University of San Diego**, May 2019

School of Leadership and Education Sciences

*Emphasis:* STEAM (Science, Technology, Engineering, Arts, and Mathematics) and Special Populations

*Capstone Project:* Claim, Evidence, Reasoning: An Action Research Study in 7th Grade Science

Teaching Credentials

**Rio Salado Community College**, May 2017

Post-Baccalaureate Program: Teacher in Residence

Single Subject Biology, Chemistry, and Physics Credentials with CLAD emphasis

Bachelor of Science

**Arizona State University**, December 2014

T. Denny Sanford School of Social and Family Dynamics

*Major:* Human and Family Development

*Minor:* Psychology

### **TEACHING EXPERIENCE**

#### **Biology, Chemistry, & Physics Teacher**

Ernest Righetti High School

2023-present

- Implementing integrated curriculum to follow Next Generation Science Standards for the Biology of Living Earth (10th grade), Chemistry of Earth Systems (11th grade), and Physics of the Universe (9th grade) courses
- Creating and assigning Common Formative Assessments for the science department, using this data to adjust instruction and mentor each other

- Organizing hands-on lab activities, collaborative group activities, and scaffolded writing activities to further develop students' science skills
- Meeting regularly with Professional Learning Community in biology, in chemistry, in physics, in the science department, and in the entire district, to collaborate and create new common curriculum
- **Forensics Club Advisor:** managing club of 15 student-members; assisting members with acquiring guest speakers, performing lab activities, and holding fundraisers

### **Biology, Chemistry, Forensic Science, & Physics Teacher**

Santa Maria High School

*2019-2023*

- Modified and implemented new integrated curriculum to follow the Biology of Living Earth, Chemistry of Earth Systems, and Physics of the Universe Next Generation Science Standards
- Created curriculum for science elective course, including hands-on lab activities, numerous guest speakers, and application of learned skills in real-life scenarios
- Successfully created online (Canvas LMS), interactive curriculum for three courses (Biology of the Living Earth, Forensic Science, and Physics of the Universe) during the COVID-19 global pandemic, including workbooks with daily assignments for each class and guest speakers' visits via Zoom
- **Lead Facilitator of the Physics Professional Learning Community, 2020-2021 school year:** scheduled and conducted weekly meetings
- **Cooperating Teacher, 2021-2022 school year:** hosted Kayli Dugas, student teacher at California Polytechnic State University, who earned her single subject credential in biology

### **Teaching Assistant**

School of Leadership & Education Sciences, University of San Diego

*Spring 2021*

- EDUC 605: Language & Culture
  - Online course (Blackboard LMS) with biweekly Zoom "class" meetings with students
- Assisted Dr. Sarina Chugani Molina as she introduced doctoral students to current and emerging concepts, theories, and methods in the field of language, culture and education policy and planning from a social justice, equity and access perspective
- Mentored doctoral students as they wrote literature-based research papers in topics of their interest, further relating them to culture, language and race

### **Integrated Science Teacher**

Orcutt Junior High School

*2018-2019*

- Implemented several model-based inquiry units to link difficult science topics to real-world problems and solutions
- Continuously evaluated students' progress through informal formative assessments, using technology whenever possible
- Closely aligned each lesson and overarching unit with the Next Generation Science Standards

## **Advanced Placement Biology & General Biology Teacher**

Orcutt Academy High School

*2017-2018*

- Collaborated closely with the biology professional learning community to develop curricula that meets and exceeds the Next Generation Science Standards
- Integrated hands-on applications that encourage students to draw independent conclusions that align with daily lessons

## **Biology & Chemistry Teacher**

Coronado High School

*2016-2017*

- Balanced and developed two sets of curricula for two very different courses, aligning them with Arizona State Standards and Next Generation Science Standards
- Implemented several model-based inquiry and research-focused units to link difficult science topics to real-world examples

## **RESEARCH EXPERIENCE**

### **Research Assistant**

Material Research Lab, University of California - Santa Barbara

*May 2021 - August 2021*

- Research Assistant to Jacob Blankenship, doctoral candidate in the Bates Research Group
- Worked on developing biodegradable thermoplastic elastomers to replace their petroleum-derived counterparts
- Adjusted the chemical architecture to determine new characteristics and capabilities, in particular, looking at the relationship between stress and strain for these molecules, focused on increasing both

*May 2022 - July 2022*

- Creating a novel curriculum project for high school chemistry, based upon experience with the Bates Research Group that encompassess NGSS' DCIs, CCCs, and SEPs
- Presenting the curricular unit at the annual Science Teachers Workshop in March 2023

### **Research Assistant**

School of Leadership & Education Sciences, University of San Diego

*September 2020 - May 2021*

- Research Assistant to Dr. Sarina Chugani Molina
- Collected, reviewed, and analyzed written works and published literature focused upon bilingual education policies locally and internationally, and practices and policies surrounding English in education in the global context
- Edited to adhere to APA (7th edition) formatting

## **OTHER WORK EXPERIENCE**

### **Student Ambassador**

SOLES Admissions Office

*2019-present*

- Field and answer questions from prospective students interested in attending the University of San Diego's PhD in Education for Social Justice online program
- Welcome newly admitted students to the PhD in Education for Social Justice online program
- Write blog posts to help provide prospective students with a clearer understanding of the dedication required of graduate students at USD

## **Tutor**

Varsity Tutors

*2016-2019*

- Regularly met with college and high school students to review concepts in online/virtual format (through Varsity Tutors' personal website), up to 25 hours each week
- Focused on biology (university-level general biology, AP biology) and chemistry (high school chemistry, AP chemistry, university-level general chemistry I and II)

## **PUBLICATIONS**

Cunningham, T. (forthcoming). Translanguaging in secondary science classrooms: A method for celebrating linguistic diversity to engage students.

Cunningham, T. (2022). Claim, evidence, reasoning: An action research study in 7th grade science writing. *Journal of Teacher Action Research*.

Cunningham, T. (2021). Action Research Is Cyclical: A Study in 9th Grade Conceptual Physics. In A. Slapac, P. Balcerzak, & K. O'Brien (Eds.), *Handbook of Research on the Global Empowerment of Educators and Student Learning Through Action Research* (pp. 397-414). IGI Global. <http://doi:10.4018/978-1-7998-6922-1.ch017>

## **JOURNAL REVIEWER**

2022 to present: *The Teacher Action Research Journal*

## **CONFERENCES & PRESENTATIONS**

“Use of Students’ Home Languages in Secondary Science Classrooms: A Study of Teachers’ Experiences,” American Educational Research Association Annual Meeting, San Diego, CA, April 2022

“Living and Sustaining Social Justice within the #BlackLivesMatter Movement”, The National Association for Multicultural Education Annual Conference, Anaheim, CA, March 2022

“Translanguaging in Secondary Science Classrooms,” SOLES’ Diversity, Inclusion, Social Justice, Excellence Showcase, University of San Diego, San Diego, CA, April 2021

## **AFFILIATIONS**

- National Science Teachers Association (*2015-present*)
- National Educators Association (*2016-present*)
- California Teachers Association (*2017-present*)
- American Educators Research Association (*2019-present*)
- Consortium for School Networking (*2020-present*)

## **SPECIAL SKILLS**

- Proficient in both Microsoft Office 365 and Google Office apps

- Curriculum Development (specifically, secondary science)
- Proficient in teaching online through Canvas, Blackboard, and Google Classroom (LMS)

## **REFERENCES**

Dr. Sarina Molina, Associate Dean at the University of San Diego

[sarina@sandiego.edu](mailto:sarina@sandiego.edu) (619) 260-7819

Dr. Joseph Lathan, Director of Online Programs for Learning at Teaching, University of San Diego

jlathan@sandiego.edu (619) 260-5913

Dr. David Preston, CEO & Founder of Open-Source Learning Network

dpreston.learning@gmail.com