

GABE AVAKIAN ORONA

Boston College
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PROFESSIONAL APPOINTMENTS

2025	Assistant Professor	Boston College Lynch School of Education and Human Development
2022	Postdoctoral Scholar	University of Tübingen Hector Research Institute of Education Sciences and Psychology

EDUCATION

2022	Ph.D.	Education, University of California, Irvine Dissertation: Cognition and Character: Measuring and Assessing Intellectual Development in Higher Education
2015	M.P.H.	Master of Public Health, California State University, Fullerton
2013	B.S.	Health Science, California State University Fullerton

PREVIOUS WORK EXPERIENCE

2022	Graduate Student Researcher, College & Beyond II (CBII): The Outcomes of Liberal Education
2022	Graduate Student Researcher, Next Generation Undergraduate Success Measurement Project (Carnegie Mellon Foundation Project), School of Education, University of California Irvine
2020	Educational Testing Service (ETS) Intern, National Assessment of Educational Progress (NAEP)
2017	Research Analyst, Institutional Research Planning and Effectiveness, Citrus College
2015	Epidemiology Intern, Epidemiology and Assessment, Orange County Health Care Agency, Santa Ana, CA
2015	Graduate Research Assistant, Department of Health Science, California State University, Fullerton

2014 Clinical Trial Research Assistant, Neurology Center of North Orange County, Fullerton, CA

Consultantships

2018 California Community College Chancellor's Office, Institutional Effectiveness Partnership Initiative; Program Evaluation and Measurement
2017 Mt. Sac; Statistical Analysis

HONORS AND AWARDS

2025 Arthur Vining Davis Foundations/ACLS Fellowships for Research on the Liberal Arts, *Examining the Impact of Public Liberal Arts Education on Cultivating Civic and Democratic Citizenship: Causes and Results*, \$45,000
2024 Cultivating Intellectual Character in the AI Age, \$470,442
2024 Visiting Scholar, State-to-State Program Baden-Württemberg/North Carolina –Faculty Mobility Program, *Ministry of Science, Research and Arts of Baden-Württemberg*. 1,200 euro.
2021 Society for Research on Educational Effectiveness (SREE) Scholar, \$8,000
Funding provided by the *Bill & Melinda Gates Foundation*.
Project: *Aligning skills, competency frameworks, and learning outcomes*
2021 David P. Gardner Research Seminar Fellowship on Higher Education, Center for Studies in Higher Education, University of California, Berkeley
2020 Educational Testing Service (ETS) Intern, National Assessment of Educational Progress (NAEP)
2017 Teaching and Learning Fellowship, University of California, Irvine
2017 UC Provost Fellowship, University of California, Irvine
2017 Diversity Fellowship, University of California, Irvine
2015 Outstanding Graduate Student Scholarship Award, California State University, Fullerton
2015 Departmental tutoring award
2014 Independent Research Scholarship (Clinical Trial), Department of Health Science
2013 Eta Sigma Gamma, National Health Education Honorary
2012 Dean's List, California State University, Fullerton

PUBLICATIONS

1. **Orona, G. A.**, Eccles, J. S., Solanki, S., Copp, D. A., Dang, Q. V., & Arum, R. (2025). The structure of adult thinking: A network approach to (meta) cognitive processing. *Learning and Individual Differences*, 117, 102584.
2. DeVries, J. M., **Orona, G. A.**, & Arum, R. (2025). Student and teacher intellectual humility at a diverse research university: the role of academic, demographic, and behavioral metrics. *Studies in Higher Education*, 1-18.

3. Zitzmann, S., & **Orona, G. A.** (2025). Why we might still be concerned about low Cronbach's alphas in domain-specific knowledge tests. *Educational Psychology Review*, 37(2), 1-18.
4. **Orona, G. A.**, & Trautwein, U. (2024). Thinking disposition education improves cognitive reflection: Experimental results from an intervention study. *Thinking Skills and Creativity*, 101569.
5. Zitzmann, S., **Orona, G. A.**, Lohmann, J. F., König, C., Bardach, L., & Hecht, M. (2024). Novick meets Bayes: Improving the assessment of individual students in educational practice and research by capitalizing on assessors' prior beliefs. *Educational and Psychological Measurement*, 00131644241296139.
6. **Orona, G. A.**, Eccles, J. S., Zitzmann, S., Fischer, C., & Arum, R. (2023). Cognitive development in undergraduate emerging adults: How course-taking breadth supports skill formation. *Contemporary Educational Psychology*, 74, 102206.
7. **Orona, G. A.**, Pritchard, D., Arum, R., Eccles, J., Dang, Q. V., Copp, D., ... & Rushing, B. (2023). Epistemic virtue in higher education: Testing the mechanisms of intellectual character development *Current Psychology*.
8. **Orona, G. A.**, Liu, O. L., Arum, R. (2023). The language of 21st century skills: Next directions for closing the skills gap between employers and postsecondary graduates. *Chinese/English Journal of Educational Measurement and Evaluation*. 4(2), 1-14.
9. Fischer C, McPartlan P, **Orona G.A.**, Yu R, Xu D, Warschauer M (2022) Salient syllabi: Examining design characteristics of science online courses in higher education. *PLoS ONE* 17(11): e0276839. <https://doi.org/10.1371/journal.pone.0276839>
10. **Orona, G. A.**, Li, Q., McPartlan, P., Bartek, C., & Xu, D. (2022). What predicts the use of interaction-oriented pedagogies? The role of self-efficacy, motivation, and employment stability. *Computers & Education*, 184, 104498.
11. Arum, R., Eccles, J. S., Heckhausen, J., **Orona, G. A.**, von Keyserlingk, L., Wegemer, C. M., ... & Yamaguchi-Pedroza, K. (2021). A Framework for Measuring Undergraduate Learning and Growth. *Change: The Magazine of Higher Learning*, 53(6), 51-59.
12. Fischer, C., Baker, R., Li, Q., **Orona, G. A.**, & Warschauer, M. (2021). Increasing success in higher education: The relationships of online course taking with college completion and time-to-degree. *Educational Evaluation and Policy Analysis*, 01623737211055768.

13. **Orona, G. A.** (2021). Gotta know why! Preliminary evidence supporting a theory of virtue learning as applied to intellectual curiosity. *Theory and Research in Education*, 19(3), 279-295.
14. **Orona, G. A., & Pritchard, D.** (2021). Inculcating curiosity: pilot results of an online module to enhance undergraduate intellectual virtue. *Assessment & Evaluation in Higher Education*, 1-15.
15. **Orona, G. A.** (2021). Philosophy's rematch: A new conceptualization of the study of higher education. *Arts and Humanities in Higher Education*, 14740222211002967.
16. **Orona, G. A.** (2021). Broken promises? Examining the effectiveness of promising practices in STEM lectures by student subgroups. *Innovative Higher Education*, 46(2), 223-239.
<https://doi.org/10.1007/s10755-020-09536-4>
17. Baker, R., & **Orona, G. A.** (2020). Gender and racial differences in awareness and consideration of curricular programs: Exploring a multistage model of major choice. *AERA Open*, 6(3), 2332858420937023.
18. Fagioli, L. P., Baker, R., & **Orona, G. A.** (2020). The role of non-cognitive variables in identifying community college students in need of targeted supports. *Research in Higher Education*, 1-39.
19. Piazza, J. R., Dmitrieva, N. O., Charles, S. T., Almeida, D. M., & **Orona, G. A.** (2018). Diurnal cortisol profiles, inflammation, and functional limitations in aging: Findings from the MIDUS study. *Health Psychology*, 37(9), 839.

Manuscripts In Peer-Review

1. **Orona, G.A.** (revise and resubmit) A Theoretical Model for Stimulating Epistemic Growth in Learners. *Educational Psychologist*.

Manuscripts In Preparation for Peer-Review

1. **Orona, G.A.** Murayama, K., Zitzmann, S. & Nagengast, B. (in prep). Two Roads to the Same Construct: Comparing Traditional and Construct-Modeling Approaches to Psychological Scale Development. *Educational Psychology Review*.

Reports

1. Arum, R., Eccles, J. S., Heckhausen, J., **Orona, G. A.**, von Keyserlingk, L., Wegemer, C. M., ... & Yamaguchi-Pedroza, K. (2021). Ensuring a more equitable future: Assessing student learning and growth in higher education. Retrieved from:

<https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Arum-FINAL.pdf>

2. **Orona, G. A.**, Li, Q., McPartlan, P., Bartek, C., Xu, D. (2020). Surveying online interaction: Relating college instructor characteristics and perceptions to online practices. University of California, Irvine. Online Learning Research Center. Retrieved from: <https://www.olrc.us/student--instructor-perceptions.html>
3. **Orona, G. A.** (2016). Supplemental instruction effectiveness report: Fall 2015. Citrus College. Retrieved from: <https://www.citruscollege.edu/admin/research/Documents/STEM/2015/STEMSIRReportFall2015.pdf>
4. **Orona, G. A.** (2015). Supplemental instruction effectiveness report: Spring 2015. Citrus College. Retrieved from: <https://www.citruscollege.edu/admin/research/Documents/STEM/2015/STEMSIRReportFall2015.pdf>

Published Data

1. Warschauer, M., Reimer, L., Denaro, K., **Orona, G.A.**, Schenke, K., Nguyen, T., Niili, A., Solanki, S. Tamara, T. (2021), Evaluating Promising Practices in Undergraduate STEM Lecture Courses, Dryad, Dataset, <https://doi.org/10.7280/D11M5Q>

RESEARCH PRESENTATIONS AND CONFERENCES

1. **Orona, G.A.** (2024, May) *Complex cognitive reasoning in higher education: Towards understanding and impacting critical thinking*. Paper session presented at the annual LERN conference, Tübingen, Germany.
2. **Orona, G.A.** (2024, April) *Improving cognitive reflection: Examining an experimental protocol on reasoning processes across student groups*. Paper session presented at the American Educational Research Association Annual Conference (AERA), Philadelphia, Pennsylvania.
3. **Orona, G.A.** (2023, August) *Cognitive in context: How course-taking breadth supports skill formation*. Paper session presented at European Association for Learning and Instruction (EARLI) Biennial Meeting, Thessaloniki, Greece.
4. **Orona, G.A.** (2023, June) *Training intellectual dispositions boosts deliberative thinking*. Personality Series Tübingen, Germany.
5. **Orona, G.A.** (2022, July) *What predicts the use of interaction-oriented pedagogies? The role of self-efficacy, motivation, and employment stability*. Current Perspectives on the Future of Self-Regulation and Motivation Research. Tübingen, Germany.

6. **Orona, G.A.**, Eccles, J., Arum, R., & Pages, R. (2022, April). *(Self-)Reporting for duty: Comparing the pragmatic benefit of the construct-modeling approach over the usual story in the validation of a liberal arts inclination scale*. NCME Annual Conference. Paper session presented at National Council on Measurement in Education (NCME) Annual Conference, San Diego, California.
7. **Orona, G.A.**, Eccles, J., Arum, R., & Pages, R. (2021, April). *Confirming Bias in Higher Education: Introducing and Validating a Confirmation Bias Performance Assessment*. National Council on Measurement in Education (NCME) Annual Conference, Virtual Meeting.
8. **Orona, G.A.** & Pritchard, D. (2021, April). *Validating a Liberal Arts Inclination Scale: Applications in Classical and Modern Test Theory*. National Council on Measurement in Education (NCME) Annual Conference, Virtual Meeting.
9. **Orona, G.A.** & Pritchard, D. (2021, April). *Inculcating intellectual character: Pilot results of an online module to enhance undergraduate intellectual virtue at university*. National Council on Measurement in Education (NCME) Annual Conference, Virtual Meeting.
10. **Orona, G.A.** (2020, Apr 17 - 21) *Policy or Pedagogy? Do Promising Practices and Teaching-Focused Faculty Have an Effect on Student Outcomes?* [Paper Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/tlzqjgl> (Conference Canceled)
11. **Orona, G.A.** (2019, November). *Policy or Pedagogy? Evaluating the Interaction between Instructor Incentives and Teaching Practices on Student Outcomes*. Paper session presented at Association for Public Policy Analysis and Management Annual Conference, Denver, Colorado.
12. **Orona, G.A.**, Vu, V., Warshauer, M. (2019, April). *Into the Wild: An Empirically Based Framework for Understanding STEM Pedagogy in University Education*. Paper session presented at the American Educational Research Association Annual Conference, Toronto, Canada.
13. Fagioli, L., Baker, R., & **Orona, G.A.** (2019, April). *The Role of Non-Cognitive Variables in Identifying Community College Students in Need of Targeted Supports*. Paper session presented at Association for Public Policy Analysis and Management Annual Conference, Student Conference, Irvine, California.
14. **Orona, G.A.**, Baker, R., Denaro, K. (2018, November). *Using Multiple Correspondence Analysis to Understand the Implementation of Promising Practices Across Instructor Characteristics in Large Undergraduate STEM Lecture Courses*. Panel session presented at Association for the Study of Higher Education. Tampa, Florida.
15. Fagioli, L., Baker, R., & **Orona, G.A.** (2018, November). *The Role of Non-Cognitive Variables in Identifying Community College Students in Need of Targeted Supports*. Paper session presented at Association for Public Policy Analysis and Management Annual Conference, Washington D.C.
16. Fagioli, L., Baker, R., & **Orona, G.A.** (2018, June). *The Role of Non-Cognitive Variables in Identifying Community College Students in Need of Targeted Supports*. Paper session presented at Community College 2 PhD Annual Conference, UC Los Angeles

17. Fischer, C., **Orona, G.A.**, McPartlan, P., & Yu, R. (2018, May). *Summer Sessions at a Large Public Research University: Evaluating Student Success in Undergraduate Online Courses*. Paper session presented at Digital Learning in the Humanities and Beyond: A UC Irvine-Tel Aviv University Symposium, Irvine
18. **Orona, G.A.** (2016, November). *Leveraging the Power of Regression Discontinuity Designs for Program Evaluation: An Institutional Simulation Using R*. Concurrent session presented at the annual conference of the California Association for Institutional Research, Los Angeles
19. **Orona, G.A.**, Piazza, J.R., Zarit, S. Almeida, D.M. (2016, November). *The Role of Event Centrality in Predicting Diurnal Cortisol*. Symposium paper presented at the annual conference of the Gerontological Society of America, New Orleans
20. Huang, Y., **Orona, G.A.** & Stallard, C. (2016, April). *Dream Big: An Innovative, Unorthodox Strategy to Strategic Planning*. Presented at the annual Research and Planning Conference, San Diego
21. **Orona, G.A.** & Piazza J.R. (2015, May). *Acute Stressor Reactivity, Chronic Strain, and Cortisol: Examining the Physiopathologic Link*. Symposium paper presented to the Department of Health Science at the Master of Public Health Research Symposium, California State University, Fullerton
22. **Orona, G.A.** & Piazza J.R. (2015, February). *Acute Stressor Reactivity, Chronic Strain, and Cortisol: Examining the Physiopathologic Link*. Symposium paper presented at the annual Student Research Competition, California State University, Fullerton
23. **Orona, G.A.**, Piazza J.R., Stawski, R.S., & Almeida, D.M. (2014, November). *Event Centrality and Daily Well-Being: The Synergistic Effect of Chronic Strains and Daily Hassles*. Symposium paper presented at the annual conference of the Gerontological Society of America, Washington D.C.

Invited Talks/Guest Lectures

- 2024 “Cognition and Character: Embedding and Evaluating Epistemic Virtues in the University Curriculum”, Applied Epistemology Project, University of North Carolina, Chapel Hill.
- 2021 “A Tale of Two Scales: The Pragmatic Benefit of The Construct-Modeling Approach Over the Usual Story in The Validation of A Liberal Arts Inclination Instrument”, Gardner Seminar, University of California, Berkeley
- 2020 “Who Does What? Utilizing process data to understand the relationship between problem-solving strategies and math ability”, NAEP Internship, Educational Testing Service
- 2020 “What is College Worth?”, Postsecondary Value Commission
- 2019 “Studies in Higher Education: Maximizing Learning through Policy and Pedagogy”, Social Dynamics, UCI

- 2017 “Program Evaluation in Institutional Research”, Regional Research and Planning CAMP meeting
- 2016 “Research Design”, Undergraduate Research Methods, Citrus College
- 2016 “Regression Discontinuity Designs using R”, Regional Research and Planning CAMP meeting
- 2015 “Quantitative Research Methods, Non-Experimental Study Designs”, Undergraduate Research Methods, California State University Fullerton
- 2015 “Quantitative Research Methods, Non-Experimental Study Designs”, Undergraduate Research Methods, California State University Fullerton
- 2015 “Epidemiology Study Design in Practice”, Advanced Epidemiology, California State University, Fullerton

TEACHING EXPERIENCE

- 2023 Instructor: Educational Trajectories and their Determinants, University of Tübingen
- 2021 Teachers Assistant: EDUC 15 LEC A: Statistics for Education Research, UC Irvine
- 2019 Statistics in R Graduate Series, “Factor Analysis”, School of Education, UC Irvine
- 2014-2015 Statistics Tutor, Undergraduate Statistics, Department of Health Science
- 2014-2015 Epidemiology Tutor, Undergraduate Epidemiology, Department of Health Science

QUANTITATIVE SKILLS

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| Statistical Software: | R, Stata, SPSS, Mplus |
| Statistical Training and Coursework: | Todd Little’s StatsCamp (2021): Bayesian Structural Equation Modeling; NCME: Bayesian Psychometric Modeling; Todd Little’s StatsCamp (2019): Psychometrics; UCSB’s MethodsU: Measurement; Statistics for Social Sciences; Advanced Statistics in the Health Sciences; Advanced Psychological Statistics; Educational, Social, and Behavioral Statistics; Longitudinal Structural Equation Modeling; Applied Regression; Data Analysis in Education; Causal Analysis; Psychometrics |

RESEARCH GRANT FUNDING & AFFILIATIONS

Examining the Impact of Public Liberal Arts Education on Cultivating Civic and Democratic Citizenship: Causes and Results

Funding agency: Arthur Vining Davis Foundation

Awarded amount: \$45,000.

Role on project: Principal Investigator

Grant awarded to Gabe Avakian Orona (PI)

Cultivating Intellectual Character in the AI Age

Funding agency: Templeton Foundation

Awarded amount: \$470,442

Role on project: Co-Principal Investigator

Grant awarded to Shayan Doroudi (PI), Duncan Pritchard (Co-PI), Gabe Avakian Orona (Co-PI)

Intervening on Curiosity: Examining the interplay between intellectual virtues and epistemic emotions

Funding agency: LEAD Graduate School & Research Network

Awarded amount: 7,428,57 Euros.

Role on project: Principal Investigator

Grant awarded to Gabe Avakian Orona (PI), Vlasta Sikimic (Co-PI), and Kou Murayama (Co-PI)

Next Generation Undergraduate Success Measurement Project

Funding agency: The Andrew W. Mellon Foundation

Awarded amount: \$1,115,000

Award number: #1806-05902

Role on project: Graduate Student Researcher

Grant awarded to Richard Arum (PI, University of California, Irvine) and Michael Dennin (Co-PI, University of California, Irvine)

SERVICE

2022	Reviewer
2021	Student Representative: Higher Education Faculty Hire Search Committee, University of California, Irvine
2018-2019	Educational Policy and Social Context (EPSC) Lab Coordinator, University of California, Irvine
2017-2019	Associated Doctoral Students in Education, Cohort Representative, University of California, Irvine
2015-2017	Student Equity Plan Evaluation Committee, Citrus College
2015-2017	STEM Evaluation Committee, Citrus College
2013-2015	Graduate Committee, Master of Public Health Representative, California State University, Fullerton
2013-2014	Research Assistant, Orange County Health Initiative, Orange County Health Care Agency
2012-2014	Research Assistant, Fibromyalgia and Chronic Pain Center, California State University, Fullerton

PROFESSIONAL SOCIETIES AND AFFILIATIONS

2023-Present	American Psychological Association
2020-Present	National Council on Measurement in Education
2018-Present	American Educational Research Association
2015-2018	The Research & Planning Group for California Community Colleges