




Anthony Schmidt

Data Science & Applied Research

Curriculum Vitae
September 2023

 anthonyschmidt.co
 aschmi11@utk.edu
 [acircleda](https://github.com/acircleda)

Education

2022	PhD, Educational Psychology and Research University of Tennessee, Knoxville <ul style="list-style-type: none">• Concentration: Evaluation, Statistics, and Measurement• Minor: Statistics and Data Science• Dissertation: Science Education to the Rescue? Assessing The Relationship Between Scientific Literacy and Carbon Emissions	Knoxville, TN
2011	MSEd, Language, Literacy, and Cultural Education Indiana University, Bloomington <ul style="list-style-type: none">• Concentration: TESOL	Bloomington, IN
2006	BA, Anthropology University of South Florida	Tampa, FL

Professional Appointments

2021 - present	Senior Data Scientist Amplify Education	Remote/Brooklyn, NY
2019-2021	Data Visualization Researcher College and University Professional Association for Human Resources (CUPA-HR)	Knoxville, TN
2014-2019	Teaching Associate English Language Institute, University of Tennessee	Knoxville, TN
2012-2014	English Language Instructor Department of English Language and Literature, Pukyong National University	Busan, South Korea

Software

Schmidt, A. (in progress). *tidyctt* [R package].

Janda, K., Gamble, H., Lama, T., Crane, S., **Schmidt, A.** (2023). *amplifyR* [Internal R package].

Rocconi, L. & **Schmidt, A.** (2022). *mlmhelpR* [R package]. <https://cran.r-project.org/web/packages/mlmhelpR/index.html>

Schmidt, A. & Kulma, K. (2020). *footprint: Calculate air travel emissions* [R package]. <https://cran.r-project.org/web/packages/footprint/index.html>

Publications

Peer Reviewed Journal Articles

Schmidt, A. (2022). University air travel and greenhouse gas mitigation: an analysis of higher education climate policies *International Journal of Sustainability in Higher Education*. <https://www.emerald.com/insight/content/doi/10.1108/IJSHE-07-2021-0318/full/html?skipTracking=true>

Schmidt, A. (2020). Are international students getting a bang for their buck? The relationship between expenditures and international student graduation rates. *Journal of International Students*. 10(3). 10.32674/jis.v10i3.1279

Schmidt, A. (2016). Listening journals for extensive and intensive listening practice. *English Teaching Forum*. 54. <https://eric.ed.gov/?id=EJ1104020>

Pre-Prints and Unpublished Manuscripts

Schmidt, A. & Rocconi, L. (2021). *STARS and stripes: Political and institutional factors that affect higher education sustainability ratings*. EdArXiv. <https://doi.org/10.35542/osf.io/d5bku>

Schmidt, A. (2021). *Comparing intensive English program (IEP) and directly-admitted international students' academic achievement*. EdArXiv. <https://doi.org/10.35542/osf.io/vm37t>

Book Reviews

Schmidt, A. (2021). Review of the book *International students in first-year writing: A journey through socio-academic space*, by M. Siczek *Journal of International Students*. 9(3). <https://doi.org/10.32674/jis.v0i0.907>

Technical Reports

- Schmidt, A.** (2022, February). *The representation of women and racial/ethnic minorities in the workforce of minority-serving higher education institutions* [Research report]. CUPA-HR. <https://www.cupahr.org/surveys/research-briefs/women-minorities-msi-workforce-february-2022/>
- Schmidt, A., & Jones, S. N.** (2021, September). *Sustainable energy attitudes report* [Research report]. University of Tennessee, Knoxville. <https://acircleda.shinyapps.io/SustainableEnergySurvey>
- Pritchard, A. & **Schmidt, A.** (2020, July). *The Higher Ed HR Workforce* [Research report]. CUPA-HR. <https://www.cupahr.org/surveys/research-briefs/>
- Bichsel, J., McChesney, J., & **Schmidt, A.** (2019). *Focus on psychology faculty: Salaries, pay equity, minority representation, and the growth of non-tenure-track faculty* [Research report]. CUPA-HR. <https://www.cupahr.org/surveys/research-briefs/>
- Nadel, S., **Schmidt, A.**, & Bichsel, J. (2019). *The impact of the FLSA overtime rule on higher education* [Research report]. CUPA-HR. <https://www.cupahr.org/surveys/research-briefs/>
- Schmidt, A.**, Rocconi, L., Morrow, J. A., Berry, B. (2019). *College of Architecture and Design's undergraduate advising 2019 report* [Research report]. Evaluation, Statistics, and Measurement (ESM) Program Research Group.
- Morrow, J. A., Rocconi, L., Butler, B., & **Schmidt, A.** (2019). *University of Tennessee's undergraduate advising 2019 evaluation end of year report* [Research report]. Evaluation, Statistics, and Measurement (ESM) Program Research Group.

Conference Papers and Presentations

International/National Conferences

- Schmidt, A.** (2021, October). *University air travel and GHG mitigation: An analysis of higher education climate policies* [Paper presentation]. Global Conference on Sustainability in Higher Education.
- Schmidt, A. & Rocconi, L.** (2021, August). *From click to code: Insights from instructors and students on moving from SPSS to R in a graduate-level applied statistics course* [Paper presentation]. Joint Statistical Meetings.
- Schmidt, A.** (2020, September). *Principles and practices for great data visualization* [Conference session]. CUPA-HR Annual Conference.
- Rosenberg, J., **Schmidt, A.**, Rosenberg, A., Longnecker, J., & Mann, M. (2020, June). *Becoming Tidier Over Time: Studying #tidytuesday as a Social Media-Based Context for Learning to Visualize Data* [Paper presentation]. International Society of the Learning Sciences. <https://repository.isls.org/handle/1/6455>.
- Schmidt, A.** (2019, October). *A comparison of direct admit and IEP student academic achievement* [Paper presentation]. TESOL International Conference, Atlanta, Georgia.
- Schmidt, A.** (2017, March). *Off course: A comparison of university and EAP coursebook writing tasks* [Paper presentation]. TESOL International Conference, Seattle, Washington.

Regional Conferences

- Rosenberg, J. M., Hodge, L., Aydeniz, M., **Schmidt, A.**, Lishinski, A., Rich, K., Longnecker, J., Mann, M., & Sadovnik, A. (2020, January). *A survey of teachers and administrators regarding the implementation of new K-8 computing education standards in Tennessee* [Paper presentation]. 14th Annual Tennessee STEM Education Research Conference, Cookeville, Tennessee.
- Schmidt, A.** (2016, October). *Academic reading circles* [Conference session]. Southeast TESOL Regional Conference, Louisville, Kentucky.
- Schmidt, A.** (2016, May). *Principled washback: Integrating test prep to foster academic skills* [Conference session]. Toronto TESOL Conference, Toronto, Canada.
- Schmidt, A.** (2016, February). *Academic reading circles and collaborative meaning construction* [Conference session]. GATESOL IEP Mini-Conference, Atlanta, Georgia.
- Schmidt, A.** (2015, October). *Audio diaries for improved spoken grammatical accuracy and pronunciation* [Conference session]. Southeast TESOL Regional Conference, New Orleans, Louisiana.

Poster Presentations

- Schmidt, A.** (2020, March). *Becoming "tidyr" over time: Data visualization development in an online community of practice* [Poster presentation]. University of Tennessee, Knoxville College of Education, Health, and Human Sciences Graduate Research Colloquium.

- Schmidt, A.** (2019, March). *A comparison of direct-admit and IEP undergraduate international student achievement* [Poster presentation]. University of Tennessee, Knoxville College of Education, Health, and Human Sciences Graduate Research Colloquium.
- Schmidt, A.** & Chitty, E. (2018, May). *Making history: Supporting language through content in intensive English programs* [Poster presentation]. NAFSA Annual Conference, Philadelphia, Pennsylvania.

Campus & Department Talks

- Schmidt, A.** (2020, October). *University air travel and GHG mitigation: Examining institutional policies through the lens of #flyingless* [Invited presentation]. Committee for the Campus Environment, University of Tennessee, Knoxville.
- Schmidt, A.** & Chitty, E. (2018, March). *Teaching international students: Improving learning for all.* [Workshop]. Teaching and Learning Innovation, University of Tennessee, Knoxville.
- Schmidt, A.** (2016, November). *Intensive reading for learner engagement.* [Conference session]. Re-Imagine: Teaching and Learning Innovation Symposium, University of Tennessee, Knoxville.

Invited Talks

- Schmidt, A.** (2018, March). *Two hot topics in OLL research: Corpus linguistics and telecollaboration* [Webinar]. OLLReN, Cambridge University Press.

Professional Workshops, Webinars, and Trainings

- Schmidt, A.** (2020, December). *Research Skills Lab: Data Visualization Basics* [Workshop]. CUPA-HR.
- Schmidt, A.** (2020, October). *Data Visualization in R* [Workshop]. Fall 2020 Evaluation, Statistics, and Measurement seminar, University of Tennessee, Knoxville.
- Pritchard, A. & **Schmidt, A.** (2020, September). *Snapshot of the higher ed HR workforce* [Webinar]. CUPA-HR.
- Schmidt, A.** (2020, April). *Tableau training: Building your first dashboard* [Workshop]. Spring 2020 Evaluation, Statistics, and Measurement seminar, University of Tennessee, Knoxville.

Industry Research Experience

- | | |
|--------------|--|
| 2021-present | <p>Embedded Assessment
Amplify Education</p> <ul style="list-style-type: none"> • Participated in the development of a productionized logistic knowledge tracing (LKT) model to provide ongoing insights to teachers regarding student abilities. • In particular, onboarded the team to our math data, created datasets for model fitting, built a custom cross-validation function, and built a custom AWS Lambda workflow in python that places the model into production. |
| 2021-present | <p>Closing the Loop
Amplify Education</p> <ul style="list-style-type: none"> • Built an automated quarterly report that flagged anomalous math content and provided psychometric measures to assist the Math content team in revising difficult or otherwise problematic student-facing Math content. Measures include item difficulty, item discrimination, readability, and isolation forest scores. |
| 2023 | <p>Cross-Product Licenses and Product Usage
Amplify Education</p> <ul style="list-style-type: none"> • Looked at the relationship between users who are licensed to multiple products and their product usage behaviors using zero-inflated models. |
| 2023 | <p>Teacher Comment Analysis
Amplify Education</p> <ul style="list-style-type: none"> • Examined the use of teacher comments on student work and provided descriptive statistics, n-gram analysis, sentiment analysis, and topic models to teams responsible for implementing this feature. |
| 2023 | <p>Live Teacher Dashboard Usage
Amplify Education</p> <ul style="list-style-type: none"> • Built an interactive Shiny document to provide the Classwork team with insights into the usage of their live teacher dashboard tool - a panel of student work teachers see as they teach the class. |

- 2022 **Math Impact Analysis**
Amplify Education
- Produced a correlational analysis using multilevel models to look at the usage of our Math product and its relationship to our Math assessments.

Graduate Research Experience

- 2021 **Sustainable Energy Working Group**
Office of Sustainability, University of Tennessee, Knoxville
- Lead the development and implementation of a large, university-wide survey. Lead design, sampling, and analysis. [Click here to view interactive dashboard.](#)
- 2021-2022 **Air Travel Research**
Office of Sustainability, University of Tennessee, Knoxville
- Analyzing air travel footprint of UTK faculty. Examined how university climate policies could mitigate greenhouse gas emissions from air travel.
- 2020 Fall **Applied Statistics III**
University of Tennessee, Knoxville
- Developed educational materials to learn R for data cleaning, data analysis, and advanced statistics for an advanced statistics course. Offered R office hours to help students learn and troubleshoot R
- 2020-2021 **Twitter and Data Visualization**
University of Tennessee, Knoxville
- Conducted social media research through text mining, twitter analytics, and survey development. Used planned missing data designs, imputation, and modeling for analysis.
- 2020 Summer **R Handbook for ESM Students**
University of Tennessee, Knoxville
- Developed handbook to learn R, tailored to evaluation, statistics and measurement students. Available at <https://bookdown.org/aschmi11/RESMHandbook/>
- 2019-2020 **Planting the Seeds for Computer Science**
University of Tennessee, Knoxville
- Needs analysis for the creation of professional development sessions to introduce new K-8 computer science standards. Work included survey design, analysis, and reporting.

Teaching Experience

Full-Time Experience

- 2014-2019 **English Language Institute, University of Tennessee** Knoxville, TN
Teaching Associate
- Courses (non-credit): Grammar, Reading, Writing, Listening/Speaking
 - Levels: Beginner to Advanced
- 2012-2014 **Department of English Language and Literature, Pukyong National University** Busan, South Korea
English Language Instructor
- Undergraduate (3-credit): Intermediate Composition, Advanced Composition, Lower-Intermediate Conversation, Upper-Intermediate Conversation
 - Graduate (2-credit): TESOL Methodology, Pronunciation for TESOL Teachers

Other Teaching Experience

2023 Spring	University of Tennessee, Knoxville Clinical Instructor <ul style="list-style-type: none"> Design course materials to teach Data Visualization in R as part of the Educational Data Science Graduate Certificate 	Knoxville, TN
2021 Spring	University of Tennessee, Knoxville Graduate Teaching Assistant <ul style="list-style-type: none"> Design materials and teach R for Applied Statistics III 	Knoxville, TN
2018 (Summer)	Southeast University Visiting Instructor, Department of Foreign Languages <ul style="list-style-type: none"> Course: Cross-Cultural Communication (1 credit, undergraduate) 	Nanjing, China
2012-2014	Samsung Electronics/Pukyong National University English Language Instructor <ul style="list-style-type: none"> Course: English Communication (3 credits, Intercultural Communication Undergraduate Program) 	Busan, South Korea
2010-2012	Yangun Middle School English Teacher	Busan, South Korea
2009	Tsukuno Junior High School English Teacher	Osaka, Japan
2007-2009	Daicheong Middle School English Teacher	Busan, South Korea

Teacher Training Experience

2012	Pukyong National University In-Service Secondary School Teacher Trainer <ul style="list-style-type: none"> National English Ability Test (NEAT) Writing Composition Training Program 	Busan, South Korea
2010-2012	Busan Education Training Institute In-Service Primary School Teacher Trainer	Busan, South Korea

Awards and Honors

2022	Hackathon Winner: "A Day in the Life" Shiny App Amplify Education	
2020	Friends of Educational Psychology and Counseling Research Grant University of Tennessee	\$400
2020	Graduate Student Colloquium Travel Award for Best Poster University of Tennessee	\$250
2019	Graduate Student Senate Travel Award University of Tennessee	\$780
2018	Diversity Professional Development Fund for Staff University of Tennessee	\$1,000
2018	Travel Fund Tennessee Association of International Educators	\$500
2017	Travel Grant for IEP Instructors University of Pittsburgh	\$1,500
2012	Teaching Excellence Award Pukyong National University, Department of Humanities	\$300

Skills

Languages	R, Python, SQL
Infrastructure	Git/Github, Snowflake, dbt, AWS
Data Visualization	R/Shiny, Tableau, Looker, Figma, Illustrator
Statistical Skills	Real-World Experience: Gaussian and non-gaussian regression modeling, MLM, machine learning, outlier analysis, logistic knowledge teaching, CFA, CTT, IRT survey weighting Training In: SEM, propensity score matching, causal inference, MLOps
Other Computer Languages	HTML, CSS, Javascript (basic)
Other Software	SPSS, Audacity, TinkerCAD
Natural Languages	English (native), French (intermediate), Korean (basic)
Other Skills	R Package Development, Agile, Notion

Current Memberships

- American Educational Research Association
- American Statistical Society
- American Associate for Public Opinion Research

Notes

This CV is reproducible. All the source code behind this CV is available on [my Github repo](#).