

PATRICK OCRAN

Utah State University

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ResearchGate: [https://scholar.google.com/citations?](https://scholar.google.com/citations?u)

Google Scholar: <https://scholar.google.com/citations?u>

EDUCATION

Ph.D. in Education	<i>Expected date of completion - 2026</i>
Utah State University, Logan, UT, USA Curriculum & Instruction, majoring in Mathematics Education & Leadership	
Master of Education	2021
Shaoxing University, Shaoxing, China Master of Mathematics Education	
TEFL Professional Development Institute	2021
Certificate in Teaching English as a Foreign Language	
Bachelor of Education	2011
University of Education, Winneba, Ghana Bachelor of Education in Mathematics	

RESEARCH INTERESTS

Mathematics teacher's beliefs, Mathematics classroom discourse, Mathematics teacher education, Assessments practices, Teacher positioning, Mathematics identity, STEM pathways

EMPLOYMENT HISTORY

Graduate Research Assistant (Presidential Doctoral Research Fellowship) - Utah State University, Logan, UT – 2025 Fall

Dr. Alyson Lavigne

Collaboratively addressed reviewers' feedback to improve manuscripts for publication.

Conducted thorough reviews of manuscripts prior to submission for publication.

Dr. Ezgi Yesilyurt

Graduate Research Assistant (Presidential Doctoral Research Fellowship) - Utah State University, Logan, UT – 2025 Spring

Observing Opportunity Gaps Project (OOG) - Dr. Alyson Lavigne

Wrote and contributed to manuscripts

Application of grants e.g. GRCO, USU

Contributed to larger grant e.g. Spencer foundation

Utilize Qualtrics to develop surveys based on existing one

Wrote and Contributed to conference proposals

Summarised results of a data

Course Instructor - Utah State University, Logan, UT **2022 – 2024**

TEAL 4630 – Methods for Teaching Middle-Level Mathematics (Fall 2022, Fall 2024)

Course focuses on pedagogy and content at the middle grades (6-8). Face-to-face and Broadcast formats.

ELED 4061 – Teaching Elementary Mathematics I: Rational Numbers, Operations, & Proportional Reasoning (Fall 2023, Spring 2024)

Course focuses on pedagogical content knowledge in rational numbers, operations, and proportional reasoning. Online format.

**Graduate Research Assistant – Presidential Doctoral Research Fellowship 2022 - 2024
Observing Opportunity Gaps Project (OOG) - Dr. Alyson Lavigne**

School of Teacher Education and Leadership, Utah State University

- Engaged in data entry and organization in excel
- Used SPSS for basic descriptive statistical analysis
- Coded classroom talk video transcripts using Classroom Talk Coding Protocol Manual (Lavigne et al., 2022)
- Wrote grant proposal and manuscripts in collaboration with my mentor (Dr. Alyson Lavigne)

**Graduate Research Assistant – Instructional Technology and Learning Science (ITLS)
(Summer 2023)**

Expansive Framing Analysis – Dr. Jessica Shumway

- Used MAXQDA in qualitative coding of lesson plans/transcripts and provided feedback on coding to the team of researchers.
- Contributed to manuscripts and conference proposals

**Graduate Research Assistant – Instructional Technology and Learning Science (ITLS)
(2022 – 2023)**

Computer Science for Paraprofessionals data collection Project- Mimi Recker, Jody Clarke-Midura and Jessica F. Shumway

- Collected classroom data using video cameras and field notes
- Engaged in data entry in excel
- Engaged in data coding and analysis

Mathematics and History Teacher - Boren Sino-Canadian School, China Oct. 2021– Jan. 2022

- Delivered Mathematics, History lessons, and tutorials to grade 7, 8, and 9 students
- Marked work, giving appropriate feedback, and maintained records of pupils' progress and development
- Researched new topic areas, maintained up-to-date subject knowledge, and devised new methods of teaching
- Participated in and organized extracurricular activities, such as outings, social activities, and sporting events.

Teaching Assistant - School of Mathematics, Physics, and Informatics, Shaoxing University, China, 2018-2019

- Teaching assistance for 1st year, 2nd semester, Algebra.
- Organized tutorial discussions on topics in Algebra for colleagues.
- Assisted in research conducted by some senior members of the Mathematics Education Department.

Assistant Examiner - West Africa Examination Council (WAEC) 2016-2018

- Marking of Core and Elective Mathematics external Examination for West African Examination Council

***High School Mathematics Teacher - Ghana Education Service* 2012-2018**

- Delivering Mathematics lessons and tutorials to SHS 1, 2 & 3 Students
- Marking work, giving appropriate feedback, and maintaining records of pupils' progress and development
- Researching new topic areas, maintaining up-to-date subject knowledge, and devising new methods of teaching
- Participating in and organizing extracurricular activities, such as outings, social activities, and sporting events;

***Mathematics Teacher - Catholic Girls Vocational Institute, Tarkwa (National Service)* 2011-2012**

- Preparing and delivering lessons to a range of classes of different ages and abilities;
- Planning lessons, marking work, and preparing students for external assessments;
- Managing students' behavior in class, on the school premises, and applying appropriate and effective measures in cases of misbehavior;
- Organized tutorials on topics in both Mathematics.

Service

Reviewer (Volunteer) – Office of Research, Utah State University – 2025 Summer

- Reviewed Undergraduate Research Proposals for Undergraduate Research & Creative grant.

Evaluator (Volunteer) –Year of Undergraduate Research, office of Research, Utah State University – 2025 Spring

- Evaluated Poster Presentations (Undergraduates and Graduates) – *Student Research Symposium*

Evaluator (Volunteer) – Office of Research, Utah State University – 2023 Fall

- Evaluated Undergraduate Research Presentations – *Student Research Symposium*

Reviewer (Volunteer) – Office of Research, Utah State University – 2023 Summer

- Reviewed Undergraduate Research Proposals for Undergraduate Research & Creative grants.

***Mathematics Teacher (Volunteer) - Apremdo Catholic Junior High School, Apremdo, Ghana* February 2022 – May 2022**

- Delivered Mathematics lessons and tutorials to JHS 1, 2, and 3 Students.
- Checked students' work and giving appropriate feedback to the school authorities and parents concerning students' progress.
- Counseled students and served as a mentor.

OTHER WORK EXPERIENCE

***Operations Manager (Part-time) - Samma Heights Enterprise, Takoradi* 2015 -2018**

- Maintain constant communication with management and sales personnel to ensure proper operations of the company.
- Develop, implement and maintain quality assurance protocols for goods and services.
- Lead, motivate and support our team within a time-sensitive and demanding environment including setup and implementation of career development plans for all direct reports and problem resolution.

- Manage timely data collection to update operations metrics to achieve our targets, reduce cost per unit, eliminate errors, and deliver excellent customer service.

PUBLICATIONS

Beck, K. E., Shumway, J. F., **Ocran, P.**, Clarke-Midura, J., & Recker, M. (2025). Expansively framing mathematics and computer science teaching with digital technology in elementary classrooms. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 13(3), 812-829. <https://doi.org/10.46328/ijemst.4862>

Beck, K. E., Shumway, J. F., **Ocran, P.**, Clarke-Midura, J., & Recker, M. (2024). Expansive framing of mathematics and computer science: Supporting educators in cross-curricular teaching. *Publications*, (Paper 16). Utah State University. https://digitalcommons.usu.edu/eled_support_pubs/16

Ayeh, I. G., **Ocran, P.**, Yalley, E., & Agyei, F. (2024). Examining the impact of information and communication technology (ICT) integration in Chinese middle school mathematics teaching and learning. *International Journal of Scientific and Research Publications*, 14(1), 227-237. <https://dx.doi.org/10.29322/IJSRP.14.01.2024.p14523>

Agyei, F., **Ocran, P.**, Ayeh, I. G., & Yalley, E. (2024). Teacher preparation in China: An examination of shaoxing university's program. *International Journal of Scientific and Research Publications*, 14(3), 194 -206. <https://dx.doi.org/10.29322/IJSRP.14.03.2024.p14721>

Agyei, F., **Ocran, P.**, Amoabeng, R. O., & Oppong, K. (2023). Examining the perceptions of Ghanaian teachers towards Continuous professional development. *Journal of Education and Practice* 14(30). DOI: [10.7176/JEP/14-30-05](https://doi.org/10.7176/JEP/14-30-05)

Wu, J., Abban, O. J., Boadi, A. D., Haris, M., **Ocran, P.**, & Addo, A. A. (2020). Exploring the relationships among CO2 emissions, urbanization, economic growth, economic structure, energy consumption, and trade along the BRI based on income classification. *Energy, Ecology and Environment*, 6(3), 213-231. <https://doi.org/10.1007/s40974-020-00176-0>

Hong-yu, Y., **Ocran, P.**, & Jinsong, W. (2019). Research on “rhombus” teaching based on the cultivation of students inquiry and transfer ability. *Journal of Inner Mongolia University (Educational Science)*, 4(32), 99-103.

Lavigne, A. L. & **Ocran, P. (in press)**. Reimagining school leadership and policy in the Digital & Artificial Intelligence (AI) Era. *Journal of School Leadership*

Marx, S., **Ocran, P.**, Weber, D., Bilings, R., Lewis, M., & Dean, T. (2025). What multiple theories can illuminate in qualitative research [Manuscript submitted for publication]. School of Teacher Education and Leadership, Utah State University..

Ocran, P. & Lavigne, A. L. (2025). Empowering mathematics teacher development: The necessity of content-specific supervision and feedback [Manuscript submitted for publication]. School of Teacher Education and Leadership, Utah State University.

Ocran, P. (2025). *Repositioning teacher agency in mathematics curriculum: A conceptual framework for identity-affirming pedagogy* [Mnuscript in preparation]. School of Teacher Education and Leadership, Utah State University.

Lavigne, A. L., **Ocran, P.**, Taylor, S., White, L., & Braden, S. (2024). Simple technology-driven metrics to capture the practice of teaching: What do they reveal? What do they conceal? [Manuscript preparation]. School of Teacher Education and Leadership, Utah State University.

CONFERENCE PRESENTATIONS

Ocran, P. (2025, August 13). *Repositioning Teacher Agency Beyond Grades: A Conceptual Framework for Identity-Affirming Mathematics Pedagogy* [Poster presentation]. Empowering Teaching Excellence Conference, USU, Logan.

Ocran, P. & Lavigne, A. L. (2024, August 14). *Inquiring about Equity Using TeachFX : Transforming Classrooms Dynamics* [Poster presentation]. Empowering Teaching Excellence Conference, USU, Logan.

Lavigne, A. L. & **Ocran, P.** (2024, August 14). *Building Equitable Classrooms Using to Track Student Participation Patterns* [Virtual Presentation]. Empowering Teaching Excellence Conference, USU, Logan.

Beck, K., Shumway, J., **Ocran, P.**, Clarke-Midura, J., & Recker, M. (2024, July). Expansive Framing of Mathematics and Computer Science: Supporting Paraprofessionals and Classroom Teachers in Cross-Curricular Teaching. Proceedings of 15th International Congress on Mathematics. Sydney, Australia. ICME-15.

Ocran, P. (2024, January 30 - 31). Volume voyages: Navigating cylinders and cones in mathematics. Utah Council of Teachers of Mathematics, Provo, UT, United States.

Lavigne, A. L. & **Ocran, P.** (2023, November 16 - 18). Possibilities for instructional leadership: A study of classroom discourse patterns, teacher factors, and student outcomes. University Council for Educational Administration, Minneapolis, United States.

Ocran, P. & Lavigne, A. L., (2025, November 19 - 22). The missing piece in mathematics supervision: Focusing on content for meaningful feedback. In Derrington, M., L. facilitator, *Leading through feedback: Strengthening communities, and building resilience in schools*. 39th Annual UCEA Convention, San Juan, Puerto Rico.

Ocran, P. & Lavigne, A. L., (**under review**). Leveraging leadership content knowledge for reflective feedback to mathematics teachers. In Derrington, M., L. facilitator, *Supervisory Feedback to Teachers: Insights from Programmatic Models, Content Areas, and Theory*. 2026 AERA Annual Meeting, Los Angeles, CA.

Book Review

Ocran, P. (2025). *Book review: Choosing to see: A frame for equity in the mathematics classroom (2021) by Kyndall Brown and Pamela Seda* [Manuscript submitted for publication]. School of Teacher Education and Leadership, Utah State University.

GUEST LECTURE(S)

Guest Lecturer, ELED 4062 Teaching Elementary School Mathematics II: Number, Operations, And Algebraic reasoning (2024, February). For Dr. Tye Campbell, Utah State University, Logan.

WORKSHOP AND PRESENTATION

Oral presentation. Ocran, Patrick (2017). Assessing mathematical literacy. A summit organized by the Tertiary Student Union of Aprembo (TSUOA), Aprembo, Western Region, Ghana.

AWARDS AND SCHOLARSHIPS

Utah State University, Logan

- Presidential Doctoral Research Fellowship (PDRF) 2022 – 2026
- Academic Opportunity Fund (AoF) 2023 Fall
- School of Teacher Education And Leadership (G.A. Award) 2023 Summer

Shaoxing University, China

- Shaoxing Provincial Scholarship 2018 – 2021

TRAINING AND WORKSHOPS

- Sexual Harassment and stalking (Refresher) Training – 13th August, 2024
- Reporting Employee Title IX (New Employee 2024-25) – 12th August, 2024 & 14th August, 2025
- Collaborative Institutional Training Initiative (CITI PROGRAM) - 25th August, 2022 & 17th August, 2025
- Workshop for International Teaching Assistants (ITA) at The Intensive English Language Institute, Utah State University, Utah (August, 2022).
- Academic Conference: Africa's Future Beyond Aid In the Context of SDGs. (23rd June 2021)
- The First China - Africa Economic and Trade Cooperation and Development Forum of Shaoxing Summit (November 2019).
- Workshop on Legal Education Base for International Students of Shaoxing University (November 2019).
- Workshop for International Students of Shaoxing University on Anti-drug laws and regulations of China. (October 2019).
- Workshop for International Students of Shaoxing University on how to identify and avoid online fraud. (May 2018).

PROFESSIONAL ORGANIZATION

- **National Association of Graduate Teachers (NAGRAT)** 2012 – 18
- **Mathematics Association of Ghana (MAG)** 2012 – 18

LEADERSHIP POSITIONS

- President –Tertiary Student Union of Apremdo (TSUOA) 2016 – 2022
- Deacon – Living Word Bible Center, Apremdo - Takoradi 2016 – 2021
- Maths and Science Quiz Coordinator- Fiaseman Senior High School, Tarkwa 2016 – 2018
- Chaplain – Association of Mathematics Student (AMES), Winneba 2010 – 2011

SPECIFIC SKILLS

- Microsoft Office Suite
- Statistical Package for Social sciences (SPSS)
- **MAXQDA**
- **R -Studio**