

## Jessica Bernards

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### PROFILE:

- 2021 AMATYC Teaching Excellence Award Recipient
- Leader of Equitable and Inclusive Mathematics Teaching Practices
- Leader and developer of the Flipped+ Teaching Model that has gained national traction as being an equitable and inclusive teaching method
- Co-Author on several higher-ed mathematics Pearson textbooks which include the creation of hundreds of hours of objective level professional videos that are also fully accessible.
- Developer of Portland Community College's Open Education Resource (OER) Liberal Arts Math, Precalculus, Calculus 1 and Calculus 2 online course shells including videos that are now used across the PCC district. These shells follow the Quality Matters Rubric, are fully accessible, equitable, and help students be able to find a sense of belonging, even in an online class
- Selected to implement, design and teach professional development classes for instructors to help them learn how to more effectively teach their in-person, online, and hybrid courses
- Selected to create curriculum in line with AMATYC, OMS (Oregon Mathematics Standards), Common Core State Standards (Washington and Oregon), AP and IB standards, and NCTM standards.
- Self-motivated with strong planning, organizational and leadership skills
- Strong practical and theoretical background in developing and selecting appropriate teaching materials in a wide range of pre-college and lower division mathematics classes including statistics
- Consistently maintains excellent relations with students, faculty, and administrators.
- Accomplished educator with demonstrated ability to teach, motivate, and direct a diverse student population while maintaining high interest and achievement

### EDUCATION:

#### University of Portland

May 2005

B.S. Mathematics and Secondary Education

Majors: Mathematics & Secondary Education

Honors: Dean's List; Kappa Delta Pi, School of Education Honor Society Member

#### Portland State University

September 2008 – June 2010

M.S.T. Mathematics

This is a Master's in math degree that includes education classes intended to prepare students to teach at the college level.

GPA – 4.0

### TEACHING EXPERIENCE:

#### Portland Community College (PCC)

**Continuous Full-Time Contract: Sept. 2010 – Present**

Full-Time Mathematics Instructor

- Specific courses regularly taught: Precalculus (online, hybrid, in-person and remote), Calculus (online, remote, and in-person), Liberal Arts Math (Online and in-person), Business Calculus (in-person), Statistics (in-person)
- 2021 AMATYC Teaching Excellence Award Winner
- Leader for the college for equitable grading and inclusive teaching strategies.
  - Co-Teacher of PCC's new professional development course for PCC faculty of all subject areas over how to equitably grade and create inclusion in the classroom in online, hybrid, and in-person courses
- Lifetime AMATYC Member (2012 – Present)
- 2017 Recipient of AMATYC's Leila and Simon Peskoff Award for Teaching in Mathematics
- Project ACCESS Cohort 9 Member
- Regular keynote presenter at many national and state level conferences including AMATYC, ICTCM, CMC3, TMATYC, LAMSMATYC, and ORMATYC
- PCC District Math Subject Area Committee (SAC) Chair (2015 – 2016)
- Member of PCC's Learning Assessment Council (2012 – 2013) and an Assessment Coach to 14 Subject Area Curriculum Committees (SAC) across the district such as chemistry, biology, welding, etc.

- Helped multiple SACs create and implement assessment plans for assessing PCC's core outcomes and their particular program's outcomes including the math department in regard to accreditation.
- Created an OER Math Study Skills Program that is fully accessible and now used at many colleges nationwide
- Created online video lectures for PCC's College Algebra course, PCC's Liberal Arts Math course and PCC's Calculus course in line with MAA and AMAYTC standards, 100% accessible, and used throughout PCC's College Algebra Courses district wide.
- Created guided lecture notes for PCC's developmental math classes up through PCC's trigonometry classes that contain explorations, examples, etc. for teachers to use with their students.
- Created a full flipped classroom curriculum for PCC's PreCalculus and Calculus Courses that has shown to improve pass rates, and create equity and inclusion within the classroom
- Co-Teacher of PCC's "One Session Classes to Improve Your Instructional Skills"
  - In these classes we help instructors across the state of Oregon apply principles of direct instruction to increase effectiveness of content delivery, apply principles of cooperative learning to improve student learning, and balance teacher- and student-centered learning approaches to appropriately meet learner needs.
- Mentor for PCC's Adjunct Faculty
- Co-Secretary for PCC's Math Department SAC (2010 – 2012)
- Volunteer with PCC's Math Fest (2011, 2012, 2017, 2018) and College Assistant Migrant Program (CAMP) (2010, 2011)
- Teach a wide variety of pre-college and lower division math classes from developmental mathematics through calculus
- Implement lesson plans to students of various education backgrounds in which instruction is differentiated and students are required to use higher level thinking
- Encourage a classroom community where learning and other ideas are respected.

#### **Vancouver Public Schools (VPS), Vancouver, WA**

**August 2005 – June 2010**

Mathematics Teacher, IB and AP Pre-Calculus, Geometry, Algebra, Advanced Algebra

- Representative of Columbia River High School for the math cadre (our district's math leadership group)
- Chosen as a representative of the school in the math textbook adoption of the District
- Taught and developed curriculum instruction for the district for our interactive math program and technology
- Aligned the districts new mathematics curriculum with NCTM and Washington State Standards
- Selected to create curriculum, including district wide finals, for Vancouver Public Schools
- Incorporated technology into the classroom with the appropriate use of computer labs, graphing calculators, CBRs, Geometer's Sketchpad, GeoGebra, group discovery projects, and personally made math videos
- Head of the Math Team at Fort Vancouver High School (2006-2007 school year)
- Completed B.E.R.C., Marilyn Simpson trainings, Advanced Placement, and International Baccalaureate Trainings

#### **PUBLISHING and CONSULTING EXPERIENCE**

##### **OER Materials**

**December 2011 – Present**

- Co-Created a Math [YouTube Channel](#) for students that includes OER videos for College Algebra through Calculus, Study Skills videos specifically related to mathematics, and teaching tips for instructors

##### **Pearson Education**

**January 2013 – Present**

- Co-Author of [Precalculus: A Right Triangle Approach, 5e](#) and [Precalculus, A Unit Circle Approach, 4e](#)
- Co-Author of *College Algebra: Concepts Through Functions, A Corerequisite Solution*
- Contributing Author on the Sullivan/Struve Developmental Math Series Fourth Edition
- Co-Author of the Guided Lecture Notes supplements that were designed to be used in a variety of ways to match different teaching and learning styles for the textbook series listed below. Throughout these notes, we also created our own explorations to help drive the learning process and aid in student understanding of the material, instead of just rote memorization.

##### **Almy Education**

**February 2020 – Present**

Math Educator Consultant – I created, implemented, and trained math educators on the following:

- [Flipping Stem](#)  
The Flipped+ Model is about more than students watching videos and doing homework. Jessica and Wendy developed this approach to increase equity and engagement as well. In this training and mentoring course,

instructors will learn how to create an inclusive environment where learners are engaged and met where they are in terms of their level of understanding.

- **[Active Learning + Immediate Feedback = Success in Mathematics](#)**  
This workshop covers how to successfully motivate and engage students in your classroom through active learning using these features that have turned the fitness device industry into a booming market. These strategies have significantly increased success in our math classes. Pass rates have shown on average a 17% increase per term since implementation over a three-year period.
- **[How to Use Kahoot! And Desmos Activity Builder in Remote Instruction](#)**  
This workshop covers how to use Kahoot! And Desmos Activity builder in both synchronous and asynchronous remote instruction. Participants will experience these platforms from both the instructor and student perspective remotely.
- **Active Inclusivity: Solutions to prevent students from feeling isolated in your online or remote math class**  
In a math class feeling lonely or that "I am the only one who doesn't get this" is a common concern amount students. This session will show how instructors can actively reach out to those students in order to build relationships and create inclusivity within their online and remote classes.

#### McGraw-Hill Education

August 2013 – June 2015

- Created instructional videos for the Messersmith *POWER* developmental math series.
- Wrote digital problems and step-by-step solutions in MHE's Connect Online Homework Platform to correlate with the Messersmith *POWER* Series
- Created ALT-TEXT for all images in the Messersmith *POWER* Series
- Aided with manuscript development for the second edition of the Messersmith *POWER* series

#### Featured National and State Level Presentations

- **Proactive and Positive Ways to Engage Students About Academic Integrity**  
Keynote for ORMATYC (2022), ICTCM (2022), AMATYC (2022)  
How can we, as educators, help our students understand what academic integrity means and how to not put themselves in a position where they're tempted? This presentation will talk about ways to be proactive with your class about academic integrity. Additionally, it will discuss how to engage with students who have participated in academic misconduct in a positive way so that students can learn from the experience and not shut down. All of this is done with equity and inclusion in mind.
- **Active Inclusivity: Solutions to prevent students from feeling isolated in your online or remote math class**  
ICTCM (2021) featured presentation  
In a math class feeling lonely or that "I am the only one who doesn't get this" is a common concern amount students. This session will show how instructors can actively reach out to those students in order to build relationships and create inclusivity within their online and remote classes.
- **Growth Mindset: The Foundations to Success in Mathematics**  
Keynote for Lonestar Circle (2019), Keynote CMC<sup>3</sup> (2020), Keynote for ORMATYC (2019)  
By now many of us have heard these buzz words, but how do they relate specifically to math? This presentation will cover what a growth mindset looks like in a math class, the importance of it, and how you can foster this trait in your students.
- **A New Approach to the Flipped Classroom**  
ORMATYC (2018), AMATYC (2018), ICTCM (2019)  
By now many of us have heard these buzz words, but how do they relate specifically to math? This presentation will cover what grit and a growth mindset look like in a math class, the importance of them, and how you can foster these traits in your students.
- **Math in an Instant Feedback World**  
ORMATYC (2017), AMATYC (2017), ICTCM (2017), TMATYC (2021), LAMSMATYC (2022)  
Fitbit, Apple Watch, and MyFitnessPal - what do these popular platforms have in common? Instant feedback; they're simple to use; and they contain a gamification component. This presentation covers how to use technology successfully to motivate and engage students in your class using these aspects.
- **Engaging Students and Setting Them Up For Success in a CoRequisite Class**  
Lonestar Circle (2019) and ICTCM (2019)  
One of the main impediments to success for corequisite students is their lack of study skills. Learn how to bring these skills into your classroom using dynamic, engaging videos and reflective questions. Additionally, you'll see various types of activities over corequisite concepts, including math station mazes, scavenger hunts, etc. that are used regularly to engage students in a meaningful way to flush out

misconceptions, gain a deeper understanding of the mathematical concepts, and to create an inclusive learning environment. Guidance on implementation will also be presented.

**Awards**

- 2023 NISOD Teaching Excellence Award
- 2021 AMATYC Teaching Excellence Award
- 2017 AMATYC Leila and Simon Peskoff Award