The Faculty

› Evan Innerst, 1991

› Rich Follansbee, 1998

› Ray Lapuz, 2000

› Michael Hoffman, 2011

› Po Tong, 2013

› David Monarres, 2015

› Sumathi Shankar, 2017
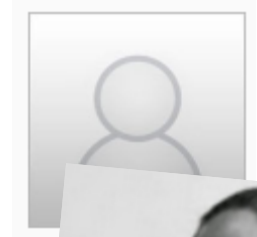
Mission Statement

› The mission of the Cañada Mathematics department is to provide a foundation for a liberal arts education and for the study of the sciences.

› This is accomplished by providing students with a broad range of courses designed
  – **to develop basic skills in computation and quantitative reasoning,**
  – **to meet the transfer requirements for colleges and universities, and**
  – **to meet the needs of occupational training programs.**

AB 705

Assembly Bill No. 705

CHAPTER 745

An act to amend Section 78213 of the Ed... community colleges.

[Approved by Governor October 13, ...
Secretary of State October 1...

LEGISLATIVE COUNSEL'...

AB 705, Irwin. Seymour-Campbell ... matriculation: assessment.

(1) Existing law establishe... the administration of the B... Colleges, as one of the segn... state. Existing law, the Seyn... provides that the purpose of college student access and suc... services of orientation, assessn... education planning services, a... prohibits a community college dis... instrument for the purposes of the of the board of governors.

This bill would require a c... maximize the probability that ed... transfer-level coursework in E... timeframe, and use, in the ... mathematics courses in orde... following: high school coursewo... grade point average. The bill would au... establish regulations governing the use ... placement models to ensure that these measu... models achieve the goal of maximizing the ... enter and complete transfer-level coursework within a one-year timeframe, and that English-as-a-second-language (ESL) instruction degree and transfer requirements in English with... The bill would also authorize the board of governor... that ensure that, for students who seek a goal othe... are in certificate or degree programs with specific re... met with transfer-level coursework, a community c... probability that a student will enter and complete the r... coursework in English and mathematics within a one-y...

The bill would prohibit a co... requiring students to enroll in rem... that lengthens their time to compl... that includes consideration of h... coursework shows that those stud... transfer-level coursework in Engli... authorize a community college distric... in additional concurrent support, inc... ESL students, during the same sem... English or mathematics course, but o... will increase their likelihood of pa... mathematics course.

To the extent the bill would impo... college districts and colleges, the bill w... program.

(2) The California Constitution req... agencies and school districts for certain... provisions establish procedures for... This bill would provide th... determines that the bill con... for those costs shall be ... above.

SEC. 3. If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

The people ...

—3—

(6) Numerous reputable studies suggest that community col placing too many students into remediation and that many more would complete transfer requirements in math and English if a bypass remedial prerequisite courses and enroll directly ... English and math courses.

(7) Instruction in English as a ... remediation in English ... foreign lang...

(9) ...

—5—

(C) Multiple measures shall apply in the placement of all students in such a manner so that either of the following may occur:
(i) Low performance on one measure may be offset by high performance on another measure.
(ii) The student can demonstrate preparedness and thus bypass remediation based on any one measure.
(D) When high school transcript data is difficult to obtain, logistically problematic to use, or not available, a community college district or community college may use self-reported high school information or guided placement, including self-placement for students.
(E) The board of governors may establish regulations governing the use of these and other measures, instruments, and placement models to ensure that the measures, instruments, and placement models selected by a community college demonstrate that they guide English and mathematics placements to achieve the goal of maximizing the probability that a student will enter and complete transfer-level coursework in English and mathematics within a one-year timeframe and credit ESL students will complete transfer-level coursework in English within a timeframe of three years. The regulations should ensure that, for students who seek a goal other in transfer, and who are in certificate or degree programs with specific requirements that are not met with transfer-level coursework, a community college district or college maximizes the probability that a student will enter and complete the required college-level coursework in English and mathematics within a one-year timeframe.

Notwithstanding Section 78218 or any other law, a community college ... t or college shall not require students to enroll in remedial English or mathematics coursework that lengthens their time to complete a degree placement research that includes consideration of high school grade erage and coursework shows that those students are highly unlikely ed in transfer-level coursework in English and mathematics. A ty college district or college may require students to enroll in concurrent support, including additional language support for ts, during the same semester that they take a transfer-level English ttics course, but only if it is determined that the support will r likelihood of passing the transfer-level English or mathematics ommunity college district or college shall minimize the impact ancial aid and unit requirements for the degree by exploring ceded support and low or noncredit support options.

(e) For purposes of this section, "assessment" means the process of gathering information about a student regarding the student's study skills, English language proficiency, computational skills, aptitudes, goals, learning skills, career aspirations, academic performance, and need for special services. Assessment methods may include, but not necessarily be limited to, interviews, standardized tests, attitude surveys, vocational or career aptitude and interest inventories, high school or postsecondary transcripts, specialized certificates or licenses, educational histories, and other measures of performance.

—4—

(15) The Legislature has made significant investments to improve student ... and placement. These investments most recently include the ... College Basic Skills and Student Outcomes Transformation ... nts, which are providing selected colleges with funding to ... edial assessment and placement, as well as curriculum and ... ys.

... al of this act is to ensure that students are not placed into ... s that may delay or deter their educational progress unless ... ts they are highly unlikely to succeed in the college-level ...

tent of the Legislature that the State Department of ... Chancellor's Office of the California Community Colleges ... y to ensure timely access to data regarding high school ... poses of community college student placement. ... 8213 of the Education Code is amended to read: ... mmunity college district or college may use any ... t for the purposes of this article without the ... rd of governors. The board of governors may adopt ... ssment instruments pursuant to the policies and ... suant to this section and the intent of this article. ... ay waive this requirement as to any assessment ... ion.

rs shall review all assessment instruments to ... he following requirements: ... s shall be sensitive to cultural and language ... , and shall be adapted as necessary to ... abilities. ... hall be used as an advisory tool to assist ... priate courses. ... all not be used to exclude students from ...

ll establish an advisory committee to ... concerning all assessment instruments ... t to this article. ... istrict or college shall maximize the ... complete transfer-level coursework ... ne-year timeframe, and use, in the ... mathematics courses in order to ... wing measures:

ultiple measures for placing ... ESL) coursework. For those ... k, their placement should ... plete degree and transfer

AB 705 Summarized

› The bill would prohibit a community college district or college from requiring students to enroll in remedial English or mathematics coursework that lengthens their time to complete a degree unless placement research that includes consideration of high school grade point average and coursework shows that those students are highly unlikely to succeed in transfer-level coursework in English and mathematics. The bill would authorize a community college district or college to require students to enroll in additional concurrent support, including additional language support for ESL students, during the same semester that they take the transfer-level English or mathematics course, but only if it is determined that the support will increase their likelihood of passing the transfer-level English or mathematics course.

Guided Self Placement

› This form is to help expose you to the type of math that you will be expected to understand before you take certain math courses. You do not need to ANSWER any of the questions, just try to assess how familiar you are with the kind and type of question being asked. Your responses will help you start a conversation with your counselor. The types of questions will be tailored toward the type of Math class that you will need to take for your major. If your major falls under the BSTEM (Business, Science, Technology, Engineering and Mathematics) category then you should look at the first set of questions. If your major falls under the SLAM (Statistics or Liberal-Arts Mathematics) then you will answer the second set of questions. While your answers do not determine your placement, your honest assessment of your own understanding will help you and your counselor to determine which class will be the best for you!!

Our Courses

Math 811

Math 110

Math 120

Math 190

Math 130

Math 225

Math 241

Math 200

Math 251

Math 243

Math 252

Math 270

Math 253

Math 275

Action Plans
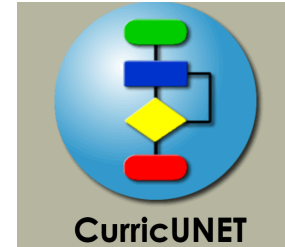
› Development of Corequisite Courses
  – All faculty are involved
  – Some courses are more developed than others

› Integration of Math Jam
  – Intersession programs can help improve comfort level with the material and being a student overall
  – We are in the process of re-vamping the Jams programs.

› EPIC
  – If the co-requisite courses are designed with active learning, tutors would be extremely useful.
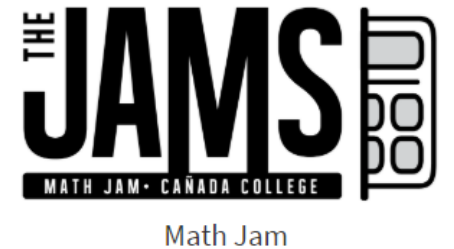
Addressing Feedback #3

› **3. Community & Labor Needs:** Currently, we have embedded tutors in select gateway STEM courses that are funded through a grant. As we begin implementing the co-requisite courses, we will need to more embedded tutors in the classrooms.

› The development of the co-requisite curricula also require more faculty attention. On top of the curriculum, many of our faculty are involved with professional development programs that are benefiting the campus. Since we are still far from the recommended full-time to part-time ratio, our department would greatly benefit from another full time faculty.

Addressing Feedback #7

› **7. Enrollment Trends:** The mathematics department fill rate is down to 89.2% in 2017/2018 from a peak fill rate of 94.7% in 2016/2017. This fill rate is in line with prior years and still exceeds the overall school's rate of 81.5%. With the new pathways and co-requisite supports we hope to draw in more students.

Graph
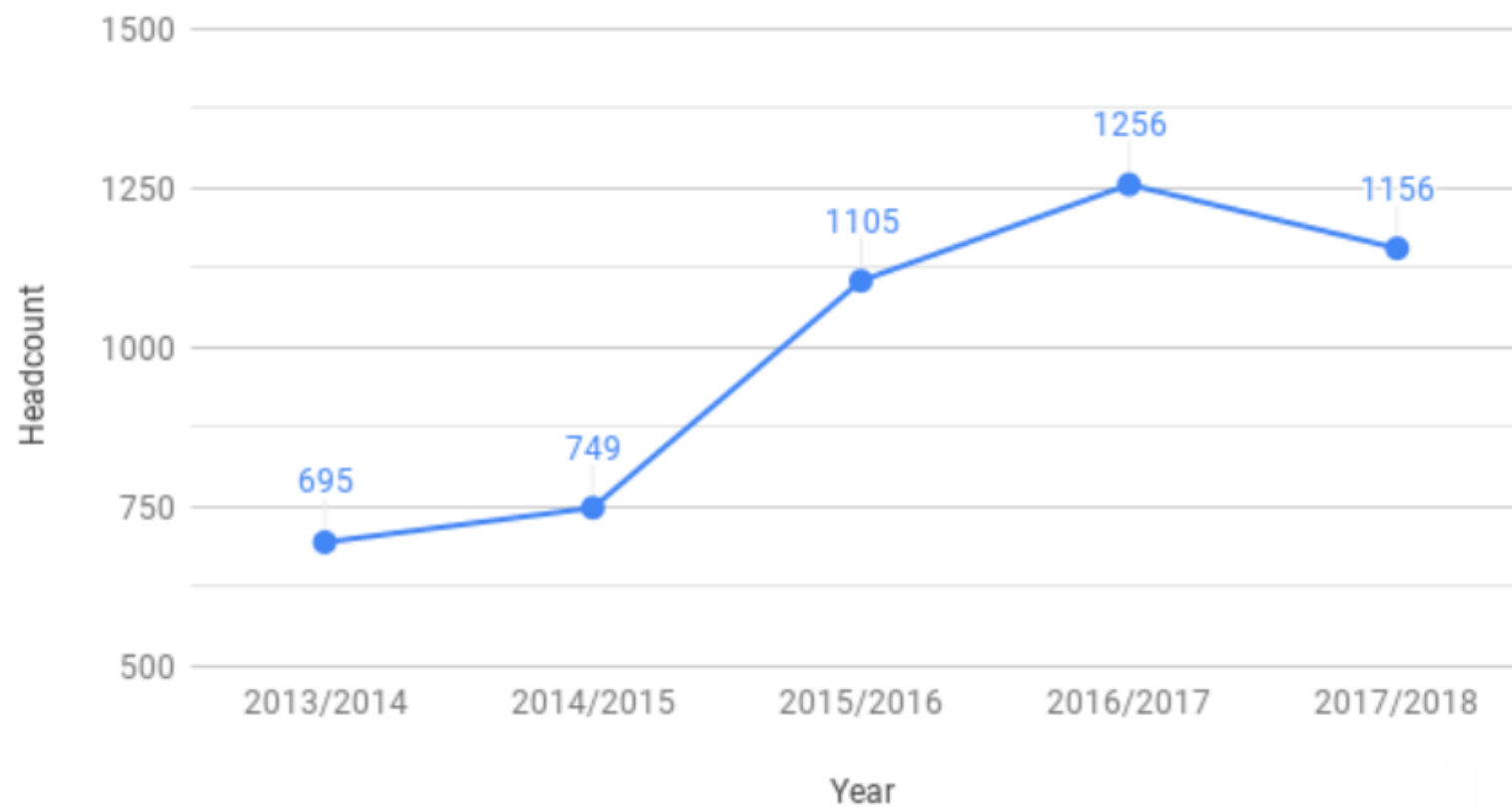
One More Graph

Female Success in Stats Pathway (190/20)

Legend:
- ● Female Success Rate
- ● Female Retention Rate
- ● Stats Pathway Success Rate
- ● Stats Pathway Retention Rate

Year	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Stats Pathway Retention Rate	80.43%	79.57%	78.55%	82.25%	82.96%
Female Retention Rate		76.56%			77.96%
Female Success Rate	66.19%		65.68%	65.19%	67.45%
Stats Pathway Success Rate	64.03%	60.48% / 59.55%	60.09%	64.17%	64.10%
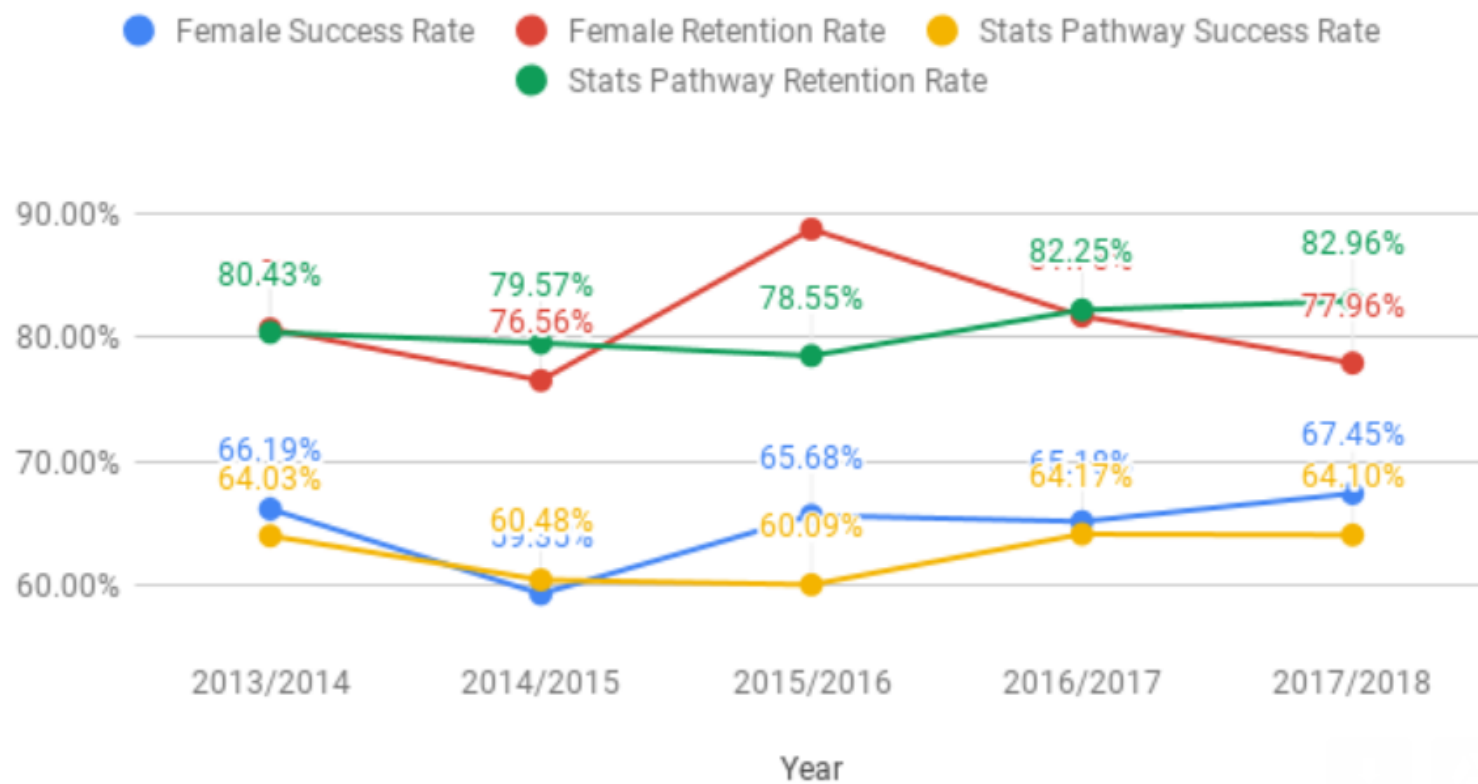
Addressing Feedback #9

› **9A. SLO Assessment - Compliance:** We have created a 3 year plan to assess our SLOs and have been on schedule.

› **9B. SLO Assessment - Impact:** The biggest changes have been made in the elementary and intermediate algebra sequences. Realizing that we needed more time to cover the key ideas we moved some topics into other classes. For example, the logarithm properties are needed by STEM majors, but not by the majority of students who take math 120, so we moved that topic to Pre- Calculus and the path to calculus where all of the STEM majors will see it.

Our Three Year Plan

Faculty SLO/PLO/ILO 3-Year Assessment Plan

Department Name: Mathematics

	2017 - 2018	2018 - 2019	2019 - 2020
Fall Semester	Math 811 Math 190 Math 251	Math 110 Math 200 Math 252	Math 120 Math 222 Math 253
Spring Semester	Math 125 Math 225 Math 270	Math 130 Math 241 Math 243 *Program Review due Spring 2019*	Math 150 Math 275 Math 818
PLOs Assessed *(Identify at least 1 PLO; identify the year & semester that the PLO will be assessed)*	Problem Solving	Graphical Representations	Problem Solving
ILOs Assessed *(ILOs are listed here as a guidance tool to help you choose courses for assessment)*	☑ Critical Thinking ☐ Community ☑ Communication ☑ Quantitative Reasoning ☑ Creativity	☑ Critical Thinking ☐ Community ☑ Communication ☑ Quantitative Reasoning ☑ Creativity	☑ Critical Thinking ☐ Community ☑ Communication ☑ Quantitative Reasoning ☑ Creativity

Professional Development

Grant: GANAS and ASPIRES

› Objective:
– Establish a Community of Practice for STEM Faculty
– Provide Professional Development

› Focus:
– Improve teaching practices
– Help students succeed in STEM courses; target underrepresented students

› Results:
– OnCourse / iWitts / Reading Apprenticeship
– Faculty Learning Program

Faculty Learning Program (FLP)

Berkeley Center for Teaching & Learning

Home   About   Connect ▾   Programs ▾   Resources ▾   Policies   Blog

Home » Programs » Transforming STEM Teaching Faculty Learning Program

Transforming STEM Teaching Faculty Learning Program

PROGRAMS

➤ Distinguished Teaching Award

➤ Instructional Improvement Grants

➤ Presidential Chair Fellows-Curriculum Enrichment Grant

➤ Teaching Excellence Colloquium

➤ Lecturer Teaching Fellows

➤ Graduate Student Assessment Fellows Program

➤ **Transforming STEM Teaching Faculty Learning Program ▾**

   ➤ Become a FLP Faculty Fellow

➤ Digital Pedagogy Fellows Program

A professional learning program for STEM faculty to redefine the college lecture

Goal & Objectives

The *Transforming STEM Teaching Faculty Learning Program (FLP)* is a professional learning program for all university and college instructors of STEM courses. The FLP is designed to improve STEM faculty's instructional practice and to be sustainably adopted by institutions. The program nurtures an interdisciplinary learning community, provides continuous support, and is situated within faculty's everyday work. As faculty redefine their role in the undergraduate lecture, students' learning gains and experiences in these courses will be affected positively.

The **goal** of the FLP is to improve student achievement in STEM undergraduate courses. The program has the following **objectives**:

- Deepen faculty's understanding of how people learn
- Change teaching behavior to support student learning
- Engage STEM faculty in habits of reflection
- Nurture a tradition of continued learning about teaching
- Build a faculty learning community

The FLP was written and developed for dissemination by Lynn Tran and Catherine Halversen at U.C. Berkeley through funding from the National Science Foundation (DUE #1626624).

Over 300 STEM faculty from the following campuses have participated so far:

- University of California (7 campuses are leading their own FLP cohorts)
- California State University (12 campuses are leading their own FLP cohorts)
- California Community Colleges (36, with several leading their own FLP cohorts)

https://teaching.berkeley.edu/programs/transforming-stem-teaching-faculty-learning-program

FLP Details

› First Semester, 7 Modules
  – Research papers
  – Discussions
  – "You Try It"
  – Prepare for Semester 2

› Second Semester, 5-7 Module
  – Peer Observations Protocol
  – Practice with three videos
  – Submit two videos for Peer Observation

Introduction 1: Learning Conversations
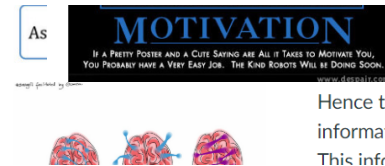
Introduction 2: Patterns, Rhythms, & Questions

Introduction 3: Students' Explanations

Introduction 4: Developing expertise

Introduction 5: Motivational Factors in Learning

Introduction 6: Mindset, Help & Stereotype

Learner's motivation to engage and persist in learning is also influenced by their beliefs about the nature of huma (implicit and explicit) about what others think about them. These social factors have implications on the extent to they need it, and even how they perform by merely being reminded of society's perceptions of the deficit of a gro gender, ethnicity, socioeconomic status.

domain-specific. Thus students can be motivated in many different ways, a depending on the situation, classroom context, and study topic. This multi- motivation suggests that instructors can influence students' motivation and Hence the onus of gathering and using feedback information rests with both instructors and learners. This information from formative assessments are
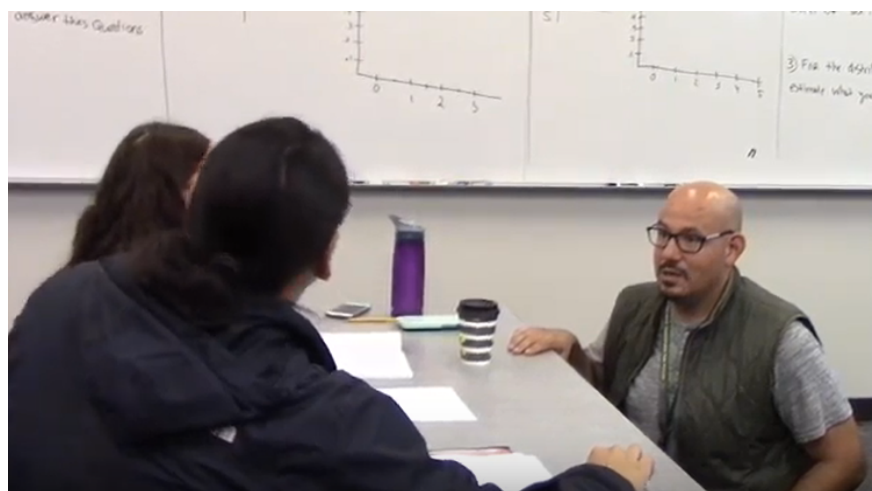
Some images
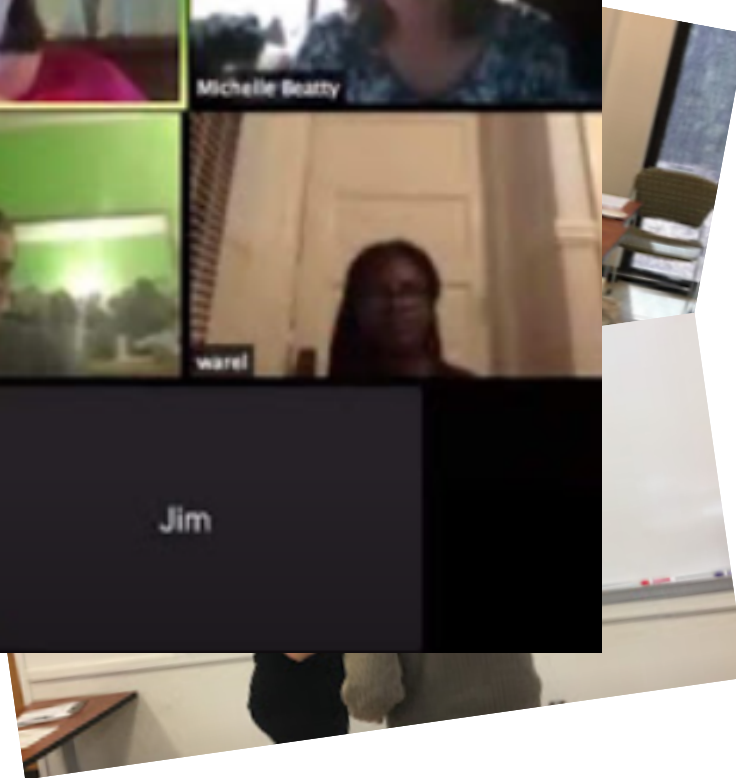
Peer Observations

Thank you

› Questions?