Teaching Experience for Undergraduates (TEU) Scale-Up Conference

Bryn Mawr College
October 12, 2019
Teaching Experience for Undergraduates (TEU) Summer Program

NSF IUSE Grant # 1525691

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Any opinions, findings, and conclusions or recommendations expressed are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
Saturday, October 12th
Dalton Hall, Bryn Mawr College

8:00- 8:30am Breakfast

8:30 – 9:00am Welcome and Introduction to the day: Victor Donnay, TEU Co-Pi and Charles Steinhorn, TEU PI

9:00 – 10:00am TEU alumni participants panel

10:00- 10:40am Joy Quill, TEU External Evaluator

10:40 – 11:00am Coffee break

11:00 – 11:45am Pedagogy course and Teaching Practicum

11:45am – 12:30pm Administration of a TEU program

Lunch: 12:30 – 1:45pm Wyndham Alumnae House
Saturday, October 12th
Dalton Hall, Bryn Mawr College

1:45 – 2:15pm Research Component of TEU: Maria Rivera Maulucci, Barnard College, TEU Co-PI

2:20 – 4:30pm Prospective TEU site teams work session

4:30 – 5:00pm Reporting and Wrap-up

Dinner (somewhere) for those staying overnight.
Land Acknowledgement

Our conference is taking place on the ancestral homelands of the Leni Lenape peoples who have lived in this region for 10,000 years. They called the region Lenapehoking; it encompassed what today is northern Delaware, eastern Pennsylvania, New Jersey and southeastern New York.
Introductions
TEU History

NSF Noyce Programs at Liberal Arts Colleges

CETE STEM Teacher Preparation Conference: May 2012
Doing Together What we Can Do Alone

Key Recommendation:
Summer program with a focused experience in discipline specific pedagogy

Pilot Program: 3 summers: 2013, ’14, ’15,
Funding: Math for America + Donor:

Brown Summer High School: Dan Bisaccio
4 TEU math students per summer
Ellie Goldberg, Director
National network of liberal arts colleges.

REU analogue
TEU History

NSF IUSE Grant $2.1 million, 5 year

2016, 17, 18, 19, 20

12 students per summer in Math TEU at Brown University
12 Science TEU at Trinity College

Pedagogy course followed by teaching practicum in some type of summer program. Supervised by mentors.

Follow Up:
Attend a national STEM Education Conference
Leadership project at home institution
TEU Alum Panel

Ishrat Ahmed, Math 2016
Emily Chattick, Science 2017
Chris Monshauer, Math 2017
Avery Travis, Science 2017
Evaluation Report

Joy Quill
Pedagogy Course and Teaching Practicum

TEU site Logistics
TEU PROGRAM AT TRINITY

Alison Draper, Ph.D.
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History of Trinity’s Program

- 2010 – Partnership with Hartford Public Schools
- 2011-2014 – High school summer science
  - Required of all rising sophomores
  - Contact hours and schedule defined by school:
    - 30 contact hours over two weeks of half-days
  - Four classes: June am, June pm, July am, July pm
The TEU Experience

- Selection
- Welcome/orientation emails
- Travel/move-in
- Pedagogy course
- Practicum
  - 2-week curriculum
  - Rinse and repeat
- Pedagogy course debrief week
- Funding for professional conference
Methods Course and Teaching Practicum
Math TEU
Main Elements of the Program

Pedagogy/Math Methods Course

Brown Summer High School Practicum

Working with a Mentor Teacher
Methods Course

Content

- Math content standards: The Standards for Mathematical Practice (SMPs) from the Common Core State Standards
- The “Launch–Explore–Summarize” Instructional model from The Connected Mathematics Project

Pedagogy

- A “play-within-a-play”
- TEUs learn the way we want them to teach
- Example: “Math Meetings”
Methods Course, continued

First Week...

- TEUs are immersed in methods course daily
- Strong focus on building community
- Focus on TEUs experiencing (as learners) working in pairs and groups on “low-threshold, high-ceiling” math problems with high cognitive demand, and not so much thinking about teachings
- Problem debriefs are focused on TEUs internalizing and applying the Standards for Mathematical Practice
Methods Course, continued

Second Week...

- Continued focus on community belonging, but now slight shift to building teaching team identity
- TEUs continue to do math together, but content focus shifts to the introduction of the “launch-explore-summarize” instructional model
- TEU teams begin to plan their summer course curriculum with input from their mentor teacher
- TEUs analyze videos of strong teaching as well as engage in a Tuning Protocol to solicit feedback on first day of class lessons
Once TEUs begin teaching...

- Methods course classes held less frequently and only in afternoons
- Focus is to review the SMPs and instructional model with real-time application and implications for their teaching
- Cognitive Demand Framework is introduced as well as at least one case study
- TEUs participate in Consultancy Protocols to elicit feedback on classroom dilemmas
Methods Course, continued

Post-Practicum

- TEUs complete end-of-summer reflection and have a “closing conference” with their mentor teacher

- End-of-summer festivities!
Brown Summer High School Teaching Practicum

Logistics

- Students teach in teams of 2 (pilot) or 3
- Approximately 3.5 weeks long
- Each team teaches one 2-hour course per day
- Students taught are rising 9th through 12th graders
- Mentor teachers observe and debrief daily
Brown Summer High School Teaching Practicum, continued

Content

- TEU teams are encouraged to choose one or a few SMPs to focus on
- All students start with “Math Meetings” as a pre-assessment
- One to two other common problems during the summer

Pedagogy

- Students encouraged to utilize “Launch–Explore–Summarize” model
Brown Summer High School Teaching Practicum, cont.

**TEUs also are responsible for:**

- Engaging with other Brown Summer High School faculty (Brown MAT students), principals, and director
- Participating in staff meetings
- Familiarizing themselves with BSHS handbook
- Planning for and Attending Friends and Family Night
Mentor Teachers

Who are they?

- Ideally experienced teachers from the local area
- A range of public, private, or charter school teachers
- urban vs. suburban (if that fits your student demographic)
- varied grade and content level
Mentor Teachers, continued

Their role

- Ideally, attend some of the methods course classes as their own PD
  Provide feedback consistent with what TEUs are learning
- Observe and debrief their team daily
- Read and provide feedback on lessons nightly
- Read and respond to weekly reflection emails
- Meet one-on-one with each TEU at beginning and middle of summer
- Read closing reflections and meet with TEUs for closing conference
Post Summer Program Activities

- TEU Leadership Project
- Attendance at Professional Conferences
- Attendance at TEU Multiple Cohorts Conference
- Contact with mentors and program director about career advising, letters of recommendation, etc.
Successes!

**TEUs have gone on to:**

Teach in public, private, and charter schools around the country in both urban and suburban settings

Enroll in top MAT programs including Stanford, UPenn, Columbia, and Harvard

Participate in Teach For America

Be selected as Knowles Teaching Fellows
Program Logistics
Trinity Program: Administrative challenges

- Selection of TEUs and hiring staff
- Room and board
- Getting TEUs access
- Payroll for TEUs* and mentor teachers
- Reimbursement for TEUs*
- Food, room reservations, programming
- Materials
- Visits to program
- Rolling with the punches

* To be done centrally in new grant.
Brown Math TEU Program Logistics

Students live on campus in dorms with meal plan provided

Several items requiring administrative attention:

- Student IDs
- Assigning students roommates and rooms
- Laundry
- Mail for TEUs
- Local Transportation (parking? Bus passes?)
- Photocopying and printing privileges
- Gym access
TEU Central Administration

- TEU website: https://teu.vassar.edu
- Online application for TEUs
- TEU program coordinator
- Payment of TEU stipends
- Travel reimbursement for TEUs
- Overall grant accounting, reporting, support